



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
FREIGHTLINER T-11
Component
Front Diesel Engine

Fluid
SAFETY-KLEEN PERFORMANCE PLUS SHD 15W40 (42 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0922843	WC0772794	---
Sample Date		Client Info		25 Jun 2024	05 Mar 2024	---
Machine Age	hrs	Client Info		24742	18718	---
Oil Age	hrs	Client Info		3195	0	---
Filter Age	hrs	Client Info		3195	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>65	12	48	---
Chromium	ppm	ASTM D5185(m)	>5	<1	1	---
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	---
Titanium	ppm	ASTM D5185(m)	>5	0	0	---
Silver	ppm	ASTM D5185(m)	>2	<1	<1	---
Aluminum	ppm	ASTM D5185(m)	>35	3	7	---
Lead	ppm	ASTM D5185(m)	>10	1	5	---
Copper	ppm	ASTM D5185(m)	>180	64	231	---
Tin	ppm	ASTM D5185(m)	>8	1	5	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	VLITE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

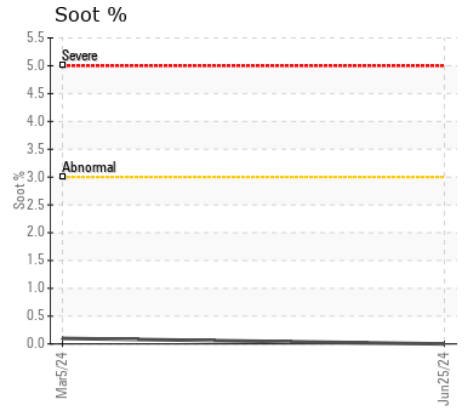
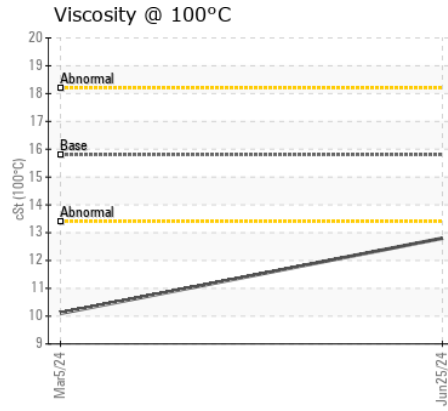
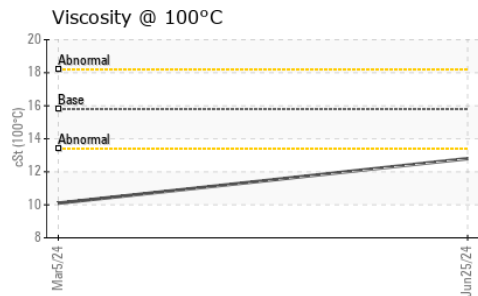
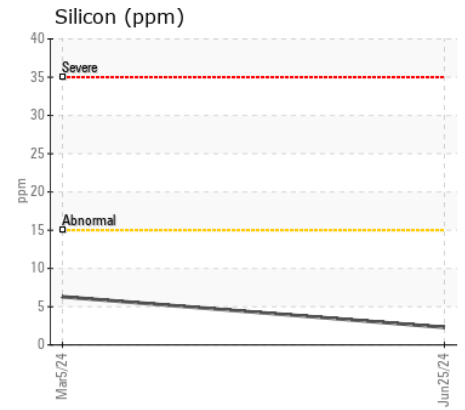
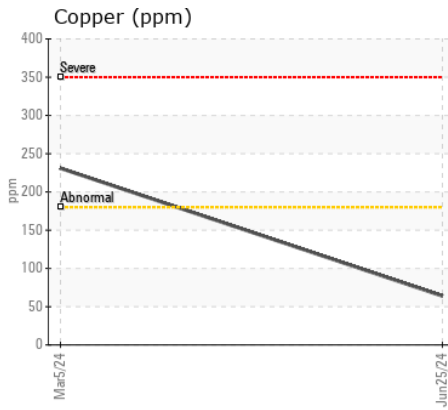
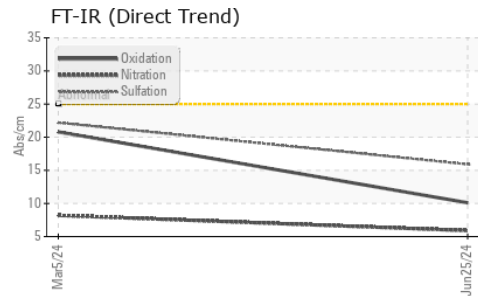
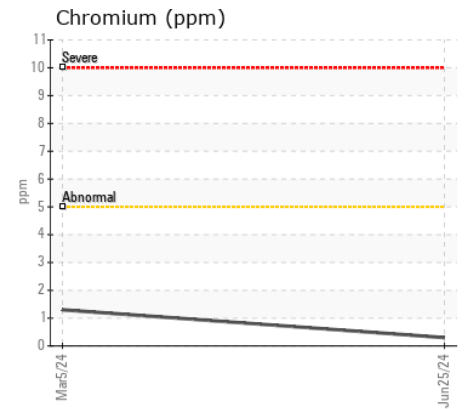
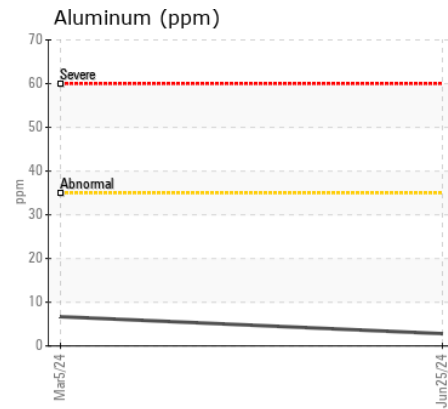
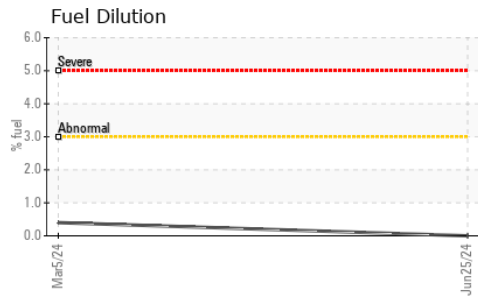
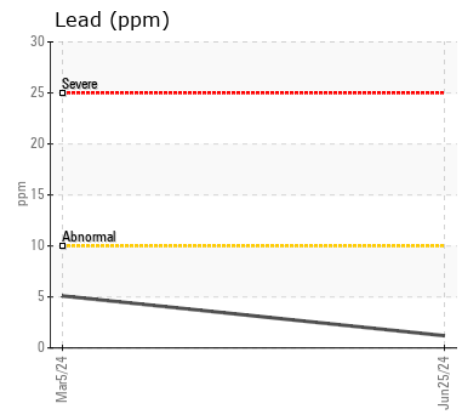
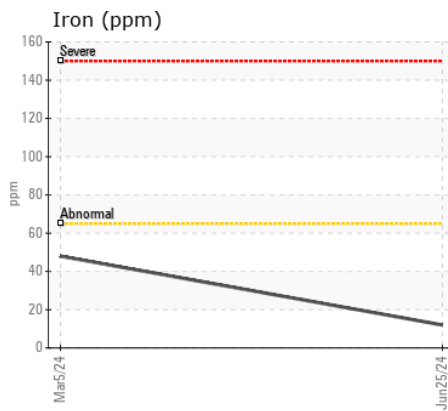
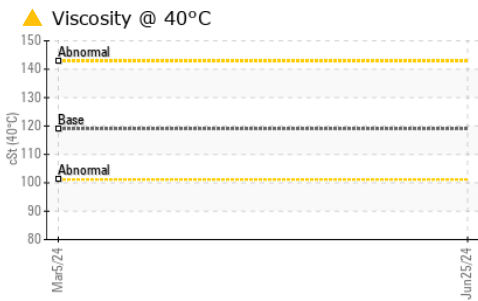
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	2	6	---
Potassium	ppm	ASTM D5185(m)	>20	7	16	---
Fuel	%	ASTM D7593*	>3.0	0.0	0.4	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	0	0.1	---
Nitration	Abs/cm	ASTM D7624*	>20	5.9	8.2	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	15.9	22.2	---
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

Viscosity of sample indicates oil is within SAE 5W40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	5	---
Boron	ppm	ASTM D5185(m)	0	8	37	---
Barium	ppm	ASTM D5185(m)	0	<1	<1	---
Molybdenum	ppm	ASTM D5185(m)	0	6	35	---
Manganese	ppm	ASTM D5185(m)		<1	4	---
Magnesium	ppm	ASTM D5185(m)	0	80	441	---
Calcium	ppm	ASTM D5185(m)	2800	2002	1792	---
Phosphorus	ppm	ASTM D5185(m)	1200	771	722	---
Zinc	ppm	ASTM D5185(m)	1350	929	858	---
Sulfur	ppm	ASTM D5185(m)	5500	2622	1993	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	10.1	20.8	---
Visc @ 40°C	cSt	ASTM D7279(m)	119.0	▲ 88.3	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.8	12.8	▲ 10.1	---
Viscosity Index (VI)	Scale	ASTM D2270*	140	142	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0922843
Lab Number : 02645733
Unique Number : 5803272
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI, Visual)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.