



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Area
TLD LOGISTICS SERVICES INC
Machine Id
FREIGHTLINER 3123443
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NL0001899	---	---
Sample Date		Client Info		08 Jul 2024	---	---
Machine Age	mls	Client Info		45725	---	---
Oil Age	mls	Client Info		45725	---	---
Filter Age	mls	Client Info		45725	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ATTENTION	---	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>80	99	---	---
Chromium	ppm	ASTM D5185m	>5	12	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	<1	---	---
Aluminum	ppm	ASTM D5185m	>30	109	---	---
Lead	ppm	ASTM D5185m	>30	0	---	---
Copper	ppm	ASTM D5185m	>150	249	---	---
Tin	ppm	ASTM D5185m	>5	3	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

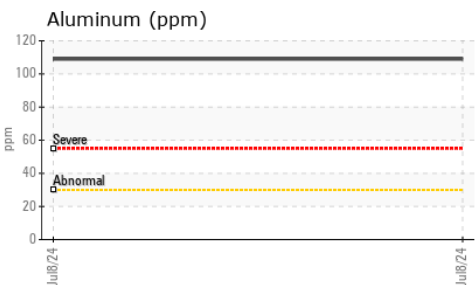
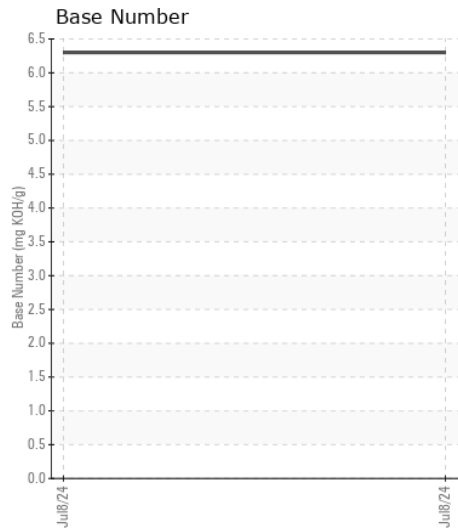
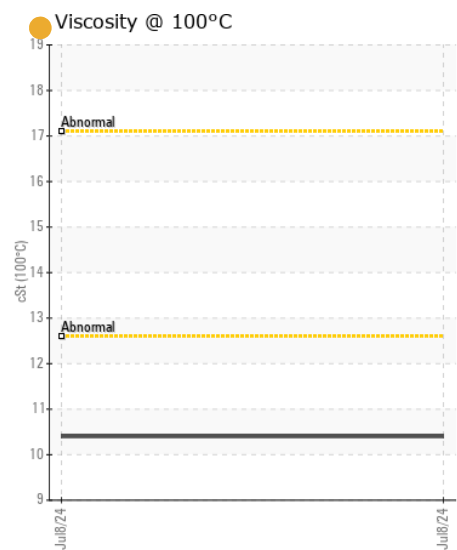
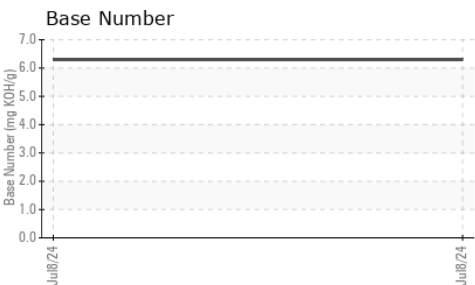
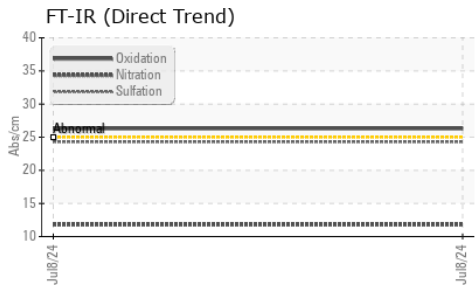
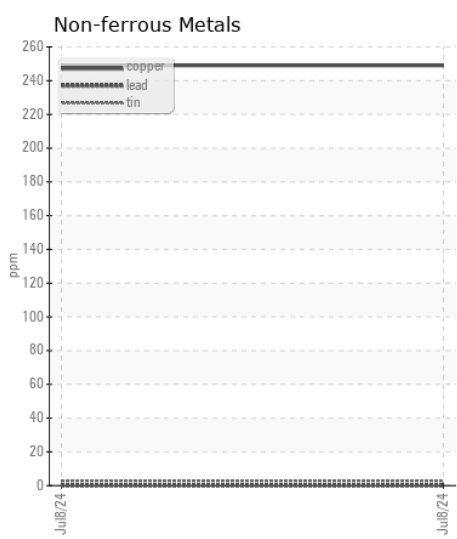
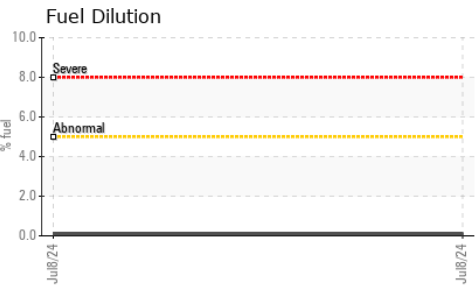
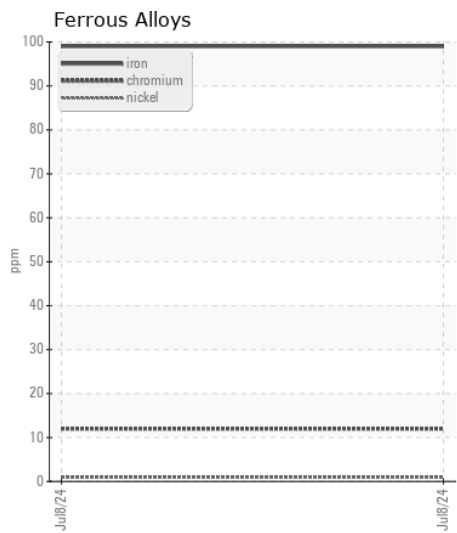
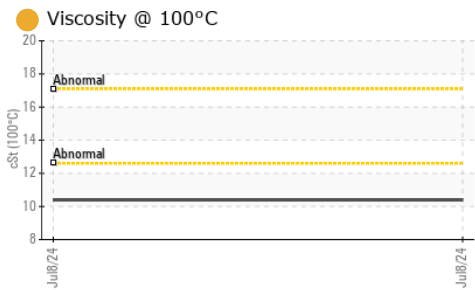
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	10	---	---
Potassium	ppm	ASTM D5185m	>20	257	---	---
Fuel	%	ASTM D3524	>5	0.1	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	11.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.3	---	---
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	---	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		7	---	---
Boron	ppm	ASTM D5185m		20	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		41	---	---
Manganese	ppm	ASTM D5185m		6	---	---
Magnesium	ppm	ASTM D5185m		527	---	---
Calcium	ppm	ASTM D5185m		1681	---	---
Phosphorus	ppm	ASTM D5185m		733	---	---
Zinc	ppm	ASTM D5185m		873	---	---
Sulfur	ppm	ASTM D5185m		2089	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.3	---	---
Visc @ 100°C	cSt	ASTM D445		10.4	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0001899 **Received** : 17 Jul 2024
Lab Number : 06239674 **Tested** : 19 Jul 2024
Unique Number : 11128508 **Diagnosed** : 19 Jul 2024 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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)