



Machine Id
325
Component
Diesel Engine
Fluid
{not provided} (--- LTR)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LW0007090	---	---
Sample Date		Client Info		09 Jul 2023	---	---
Machine Age	mls	Client Info		0	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	28	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>4	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	3	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	8	---	---
Tin	ppm	ASTM D5185m	>15	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

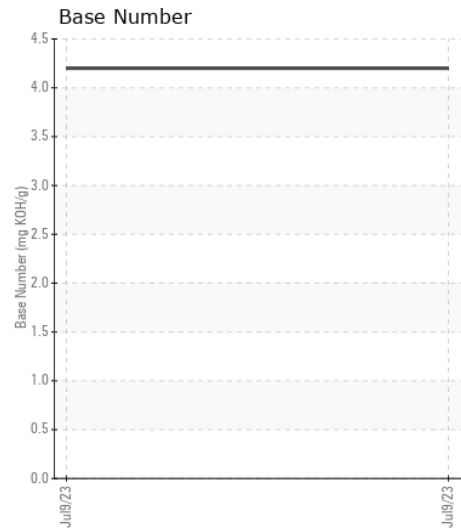
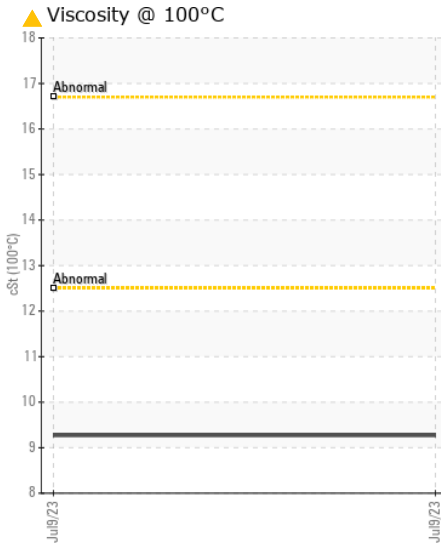
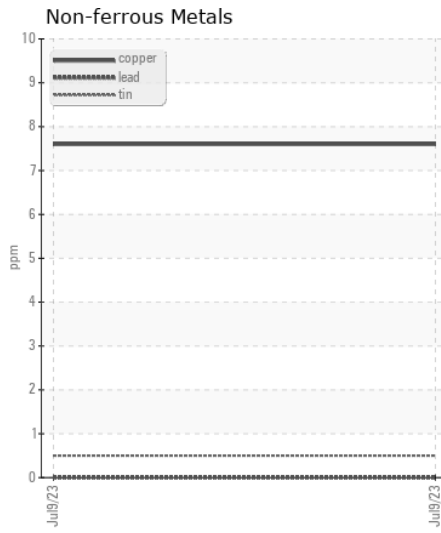
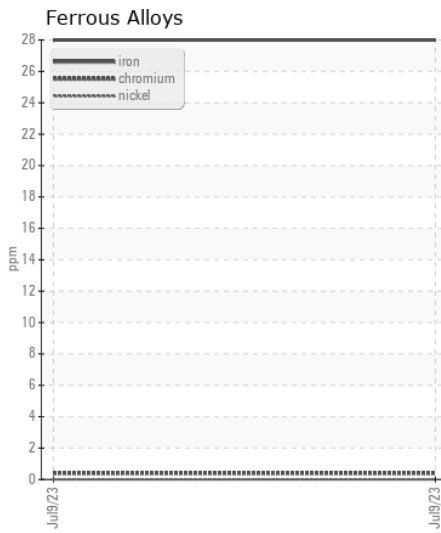
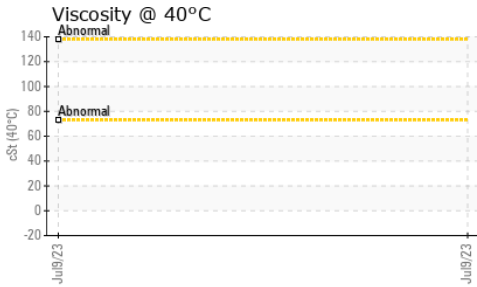
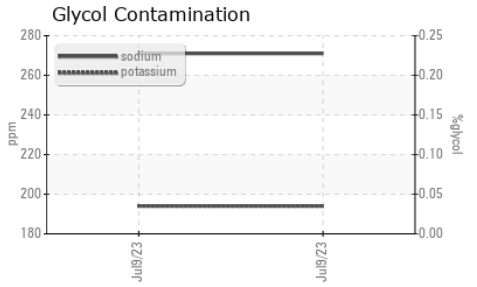
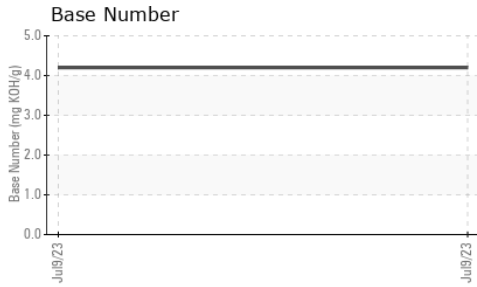
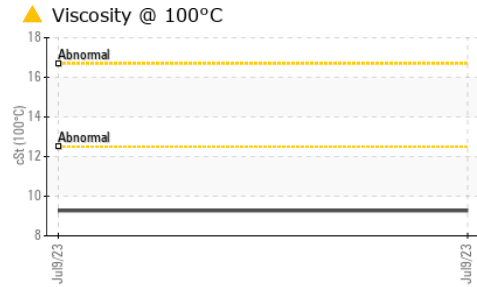
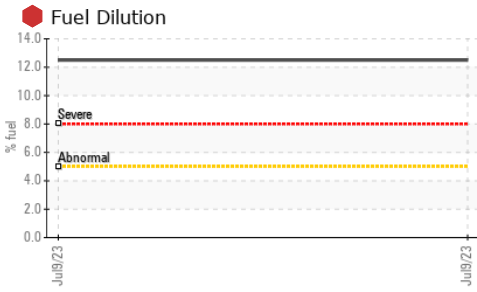
Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	6	---	---
Potassium	ppm	ASTM D5185m	>20	▲ 194	---	---
Fuel	%	ASTM D3524	>5	◆ 12.5	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	*ASTM D2982		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.1	---	---
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

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		▲ 271	---	---
Boron	ppm	ASTM D5185m		17	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		57	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		617	---	---
Calcium	ppm	ASTM D5185m		942	---	---
Phosphorus	ppm	ASTM D5185m		499	---	---
Zinc	ppm	ASTM D5185m		719	---	---
Sulfur	ppm	ASTM D5185m		2326	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	29.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		4.2	---	---
Visc @ 100°C	cSt	ASTM D445		▲ 9.27	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0007090
Lab Number : 05893362
Unique Number : 10549172
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, VI)

Received : 10 Jul 2023
Tested : 14 Jul 2023
Diagnosed : 14 Jul 2023 - Doug Bogart

LIV TRANSPORTATION, INC
 9809 INDUSTRIAL DRIVE
 BRIDGEVIEW, IL
 US 60455
 Contact: CHRIS
 CHRIS@LIVTRANSPORTATION.COM

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)

T:
F: