



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL



Area
Store 2 - Beaver [RO#142726]
Machine Id
JOHN DEERE 550K 1T0550KKANF418184
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (4 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0042626	---	---
Sample Date		Client Info		11 Sep 2023	---	---
Machine Age	hrs	Client Info		517	---	---
Oil Age	hrs	Client Info		517	---	---
Filter Age	hrs	Client Info		517	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				SEVERE	---	---

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Iron	ppm	ASTM D5185m	>51	45	---	---
Chromium	ppm	ASTM D5185m	>11	3	---	---
Nickel	ppm	ASTM D5185m	>5	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>31	6	---	---
Lead	ppm	ASTM D5185m	>26	9	---	---
Copper	ppm	ASTM D5185m	>26	▲ 111	---	---
Tin	ppm	ASTM D5185m	>4	3	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

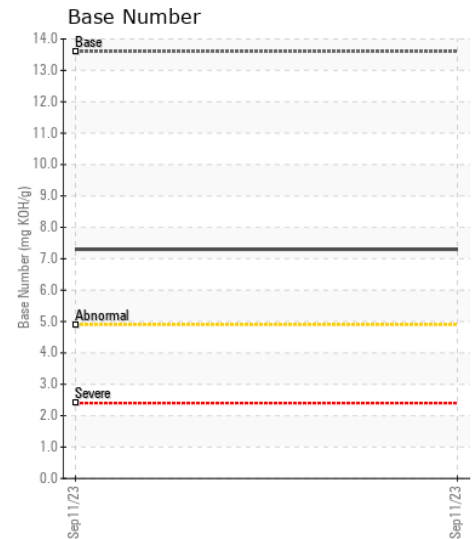
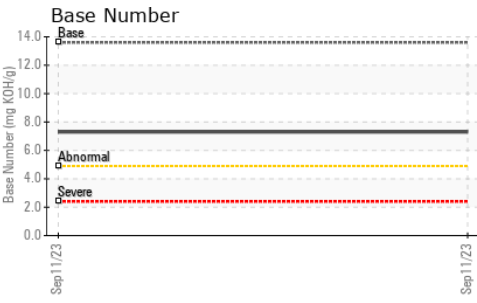
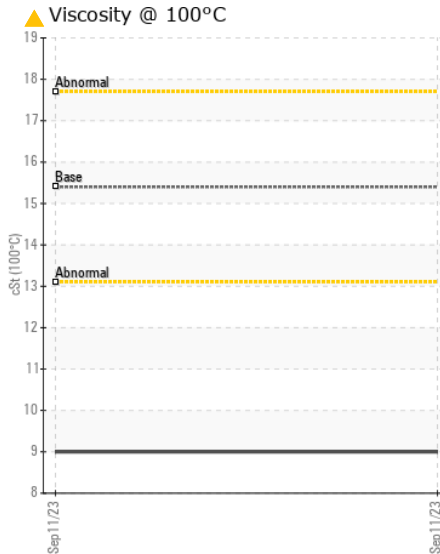
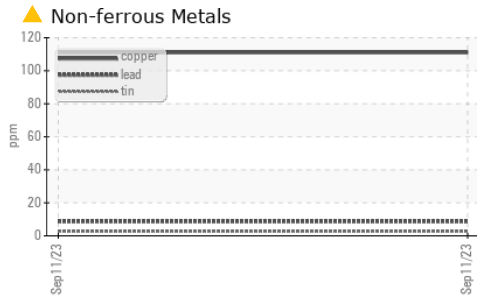
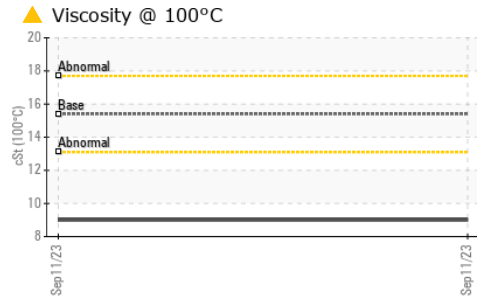
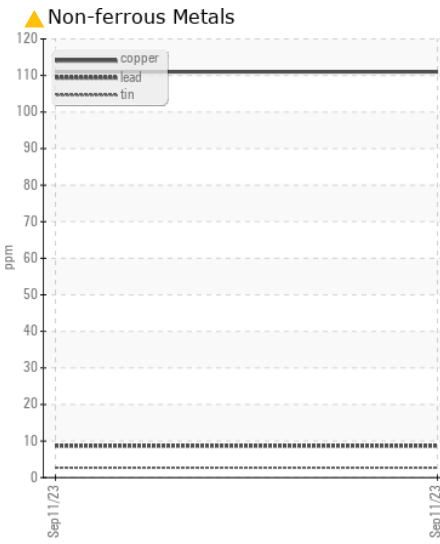
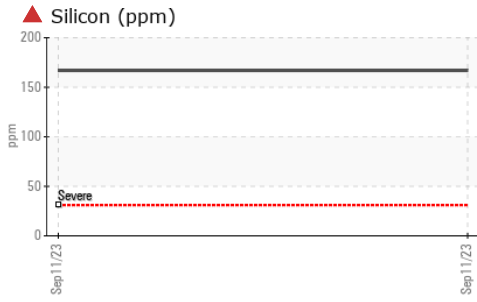
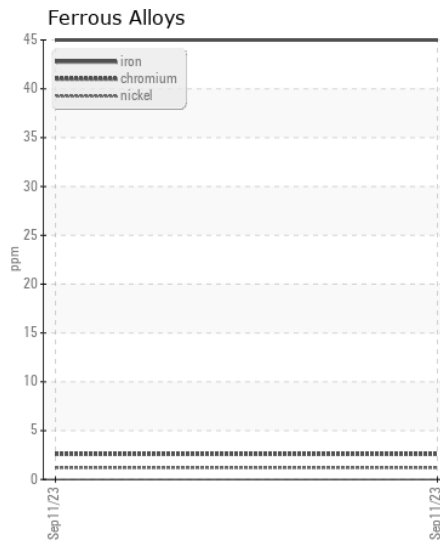
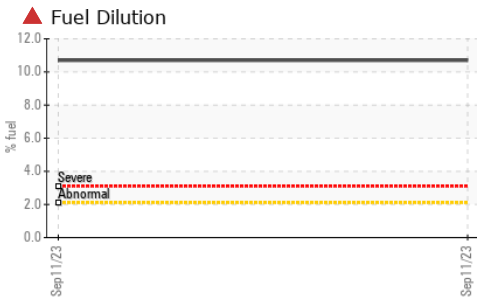
Elemental level of silicon (Si) above normal indicating ingress of seal material. There is a high amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>120	▲ 167	---	---
Potassium	ppm	ASTM D5185m	>20	6	---	---
Fuel	%	ASTM D3524	>2.1	▲ 10.7	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.5	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.9	---	---
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	>0.21	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.

Sodium	ppm	ASTM D5185m	>31	7	---	---
Boron	ppm	ASTM D5185m		98	---	---
Barium	ppm	ASTM D5185m		3	---	---
Molybdenum	ppm	ASTM D5185m		192	---	---
Manganese	ppm	ASTM D5185m		4	---	---
Magnesium	ppm	ASTM D5185m		625	---	---
Calcium	ppm	ASTM D5185m		1534	---	---
Phosphorus	ppm	ASTM D5185m		837	---	---
Zinc	ppm	ASTM D5185m		1035	---	---
Sulfur	ppm	ASTM D5185m		3300	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.3	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 9	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0042626 **Received** : 13 Sep 2023
Lab Number : 05950667 **Tested** : 15 Sep 2023
Unique Number : 10646626 **Diagnosed** : 18 Sep 2023 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

LESLIE EQUIPMENT COMPANY
 105 TENNIS CENTER DR.
 MARIETTA, OH
 US 45750-9765
 Contact: LEANNE KENDALL
 KendalLeanne@lec1.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: (740)373-5570