



Machine Id
JOHN DEERE 650K-II 1T0650KKCNF430135

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: W12977)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0161048	---	---
Sample Date		Client Info		06 Mar 2023	---	---
Machine Age	hrs	Client Info		719	---	---
Oil Age	hrs	Client Info		719	---	---
Filter Age	hrs	Client Info		719	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

The copper level is abnormal. All other metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	54	---	---
Chromium	ppm	ASTM D5185m	>11	2	---	---
Nickel	ppm	ASTM D5185m	>5	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	<1	---	---
Aluminum	ppm	ASTM D5185m	>31	8	---	---
Lead	ppm	ASTM D5185m	>26	27	---	---
Copper	ppm	ASTM D5185m	>26	▲ 110	---	---
Tin	ppm	ASTM D5185m	>4	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

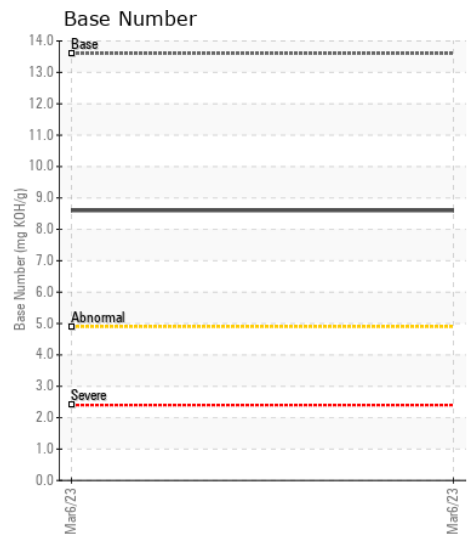
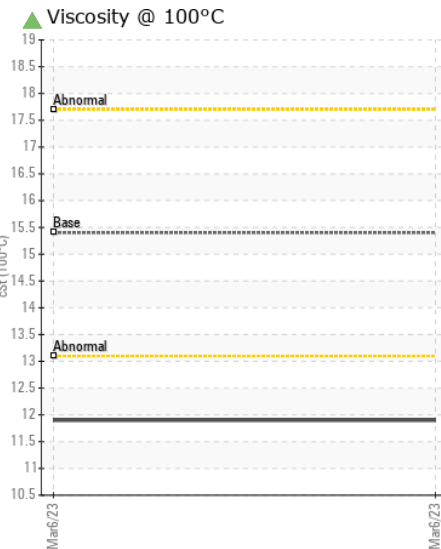
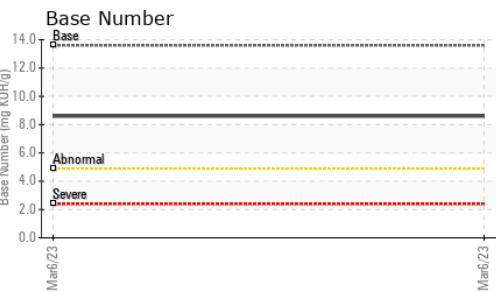
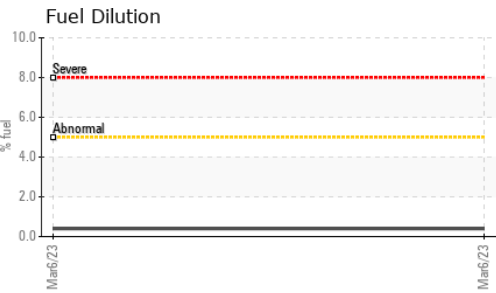
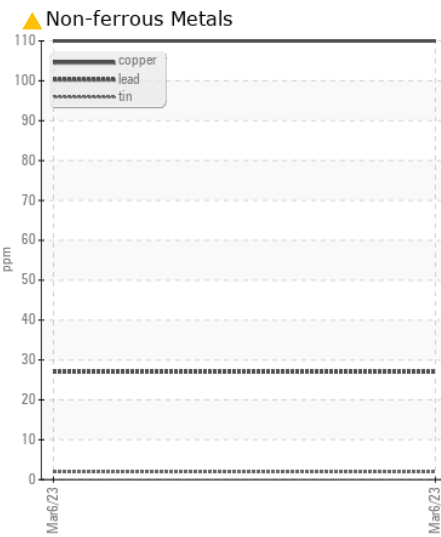
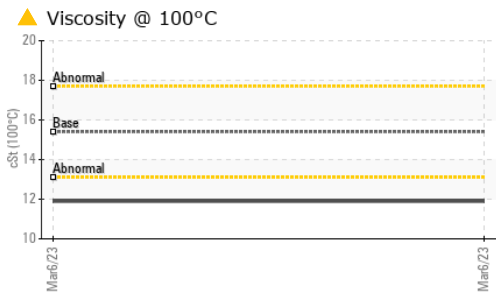
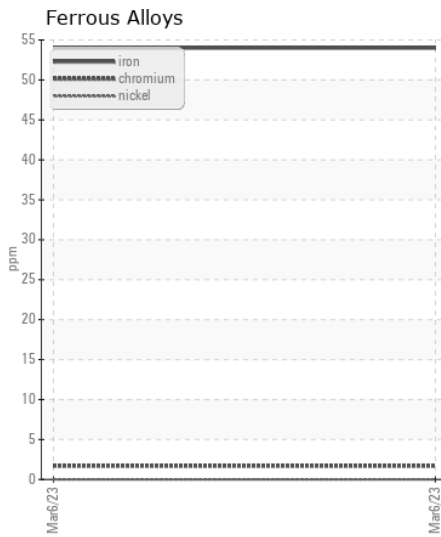
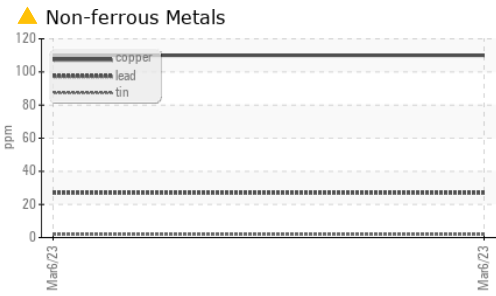
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	12	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Fuel	%	ASTM D3524	>5	0.4	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.6	---	---
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

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	>31	5	---	---
Boron	ppm	ASTM D5185m		106	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		275	---	---
Manganese	ppm	ASTM D5185m		4	---	---
Magnesium	ppm	ASTM D5185m		891	---	---
Calcium	ppm	ASTM D5185m		1556	---	---
Phosphorus	ppm	ASTM D5185m		826	---	---
Zinc	ppm	ASTM D5185m		1115	---	---
Sulfur	ppm	ASTM D5185m		3046	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.9	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0161048 **Received** : 10 Mar 2023
Lab Number : 05788310 **Diagnosed** : 16 Mar 2023
Unique Number : 10372981 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

JRE - CASTLE HAYNE
 113 CROWATAN ROAD
 CASTLE HAYNE, NC
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Contact: WILMINGTON SHOP

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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)