



Area

[W64791]

Machine Id

JOHN DEERE 160G 1FF160GXTLF058093

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: W64791)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0203849	JR0128198	---
Sample Date		Client Info		27 Feb 2024	21 Apr 2022	---
Machine Age	hrs	Client Info		622	101	---
Oil Age	hrs	Client Info		521	0	---
Filter Age	hrs	Client Info		521	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

The copper level is abnormal. Elemental level of copper (Cu) probably due to leaching of copper from copper components (i.e. cooling core) by the oil additives. All other metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	60	33	---
Chromium	ppm	ASTM D5185m	>11	2	<1	---
Nickel	ppm	ASTM D5185m	>5	2	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	<1	---
Aluminum	ppm	ASTM D5185m	>31	10	9	---
Lead	ppm	ASTM D5185m	>26	8	4	---
Copper	ppm	ASTM D5185m	>26	▲ 105	22	---
Tin	ppm	ASTM D5185m	>4	2	1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

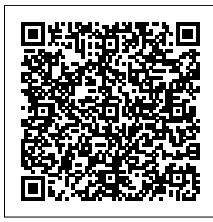
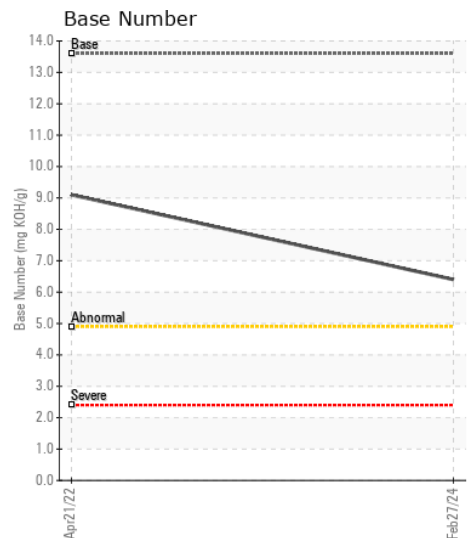
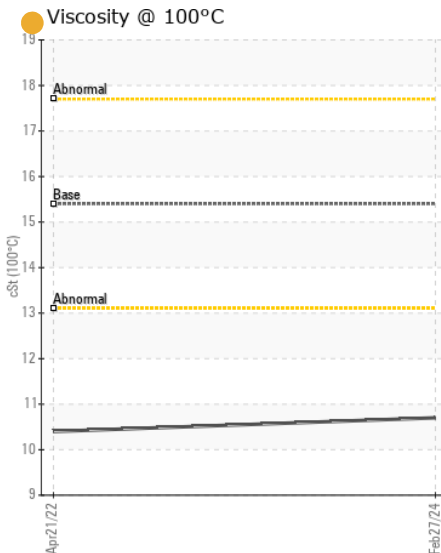
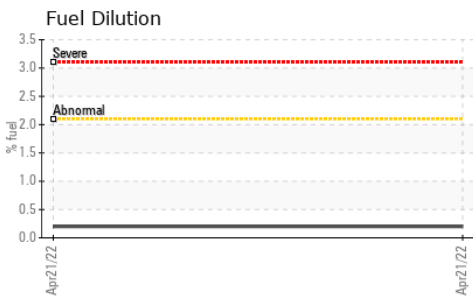
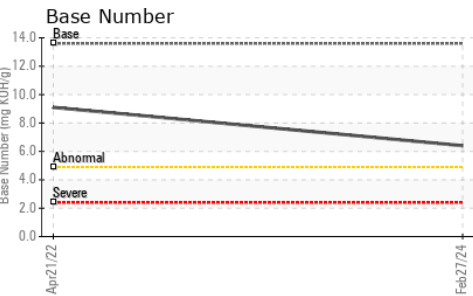
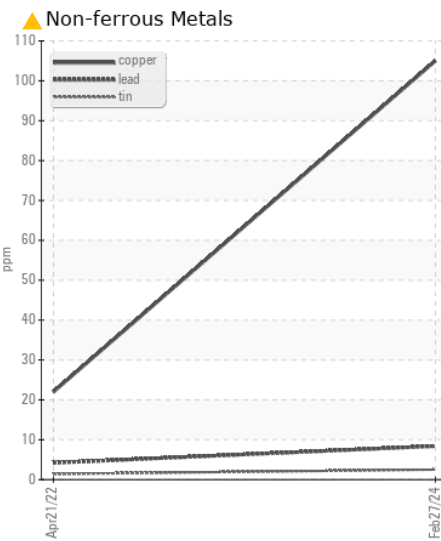
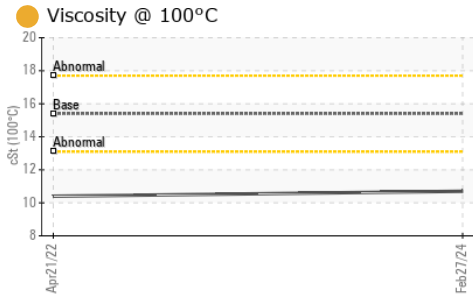
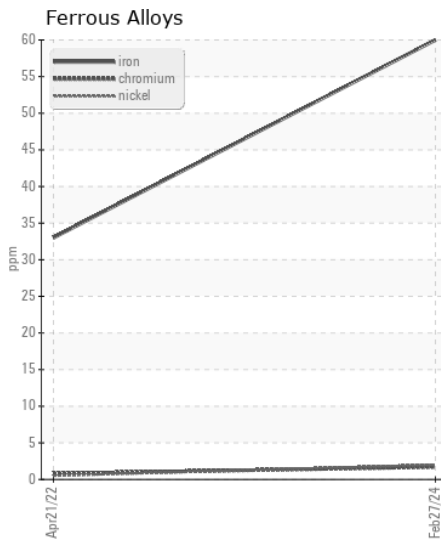
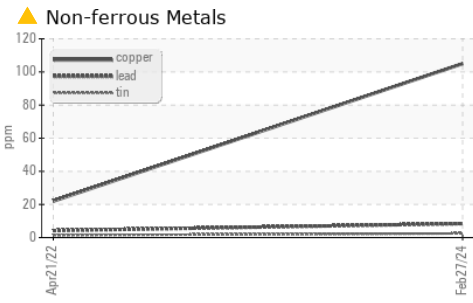
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	11	8	---
Potassium	ppm	ASTM D5185m	>20	4	3	---
Fuel	%	ASTM D3524	>2.1	<1.0	0.2	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	10.1	6.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	21.0	---
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	>0.21	NEG	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	6	5	---
Boron	ppm	ASTM D5185m		77	273	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		200	191	---
Manganese	ppm	ASTM D5185m		5	4	---
Magnesium	ppm	ASTM D5185m		709	693	---
Calcium	ppm	ASTM D5185m		2073	1582	---
Phosphorus	ppm	ASTM D5185m		952	925	---
Zinc	ppm	ASTM D5185m		1326	1058	---
Sulfur	ppm	ASTM D5185m		3420	2828	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.2	16.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.4	9.1	---
Visc @ 100°C	cSt	ASTM D445	15.4	● 10.7	10.4	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0203849 **Received** : 29 Feb 2024
Lab Number : 06104178 **Tested** : 01 Mar 2024
Unique Number : 10902408 **Diagnosed** : 02 Mar 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, TBN)

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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)