



Area

[W51730]

Machine Id

JOHN DEERE 35G 1FF035GXLHK281762

Component

Diesel Engine

Fluid

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

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0211957	JR0148500	---
Sample Date		Client Info		09 May 2024	20 Oct 2022	---
Machine Age	hrs	Client Info		1444	1043	---
Oil Age	hrs	Client Info		0	143	---
Filter Age	hrs	Client Info		0	143	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				SEVERE	NORMAL	---

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>51	▲ 183	21	---
Chromium	ppm	ASTM D5185m	>11	4	4	---
Nickel	ppm	ASTM D5185m	>5	1	0	---
Titanium	ppm	ASTM D5185m		1	0	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>31	● 28	3	---
Lead	ppm	ASTM D5185m	>26	7	8	---
Copper	ppm	ASTM D5185m	>26	12	1	---
Tin	ppm	ASTM D5185m	>4	3	0	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

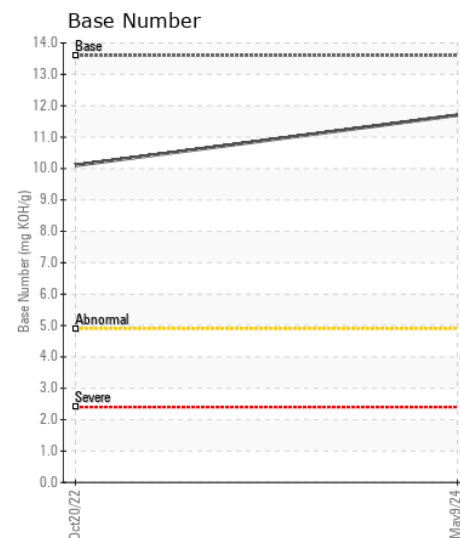
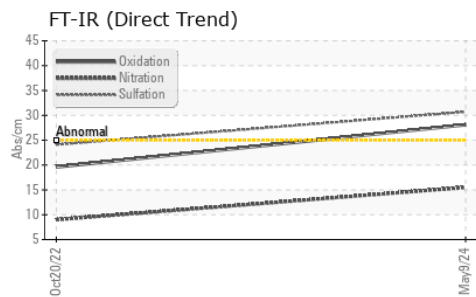
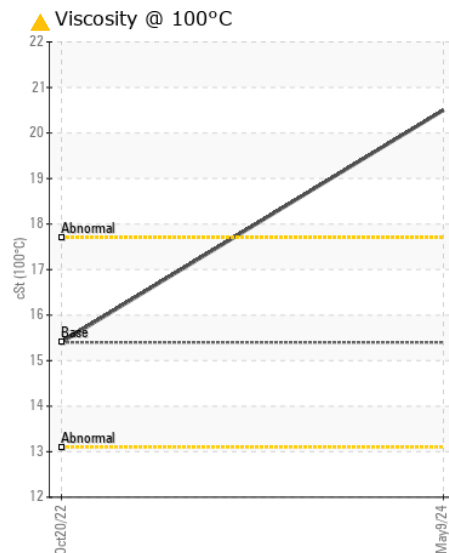
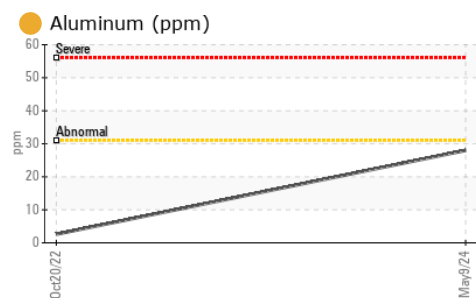
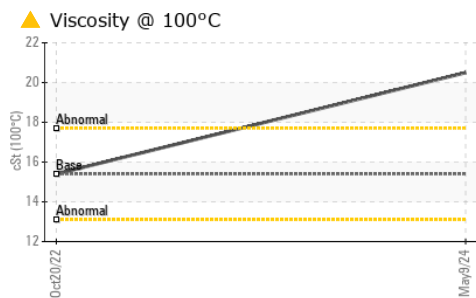
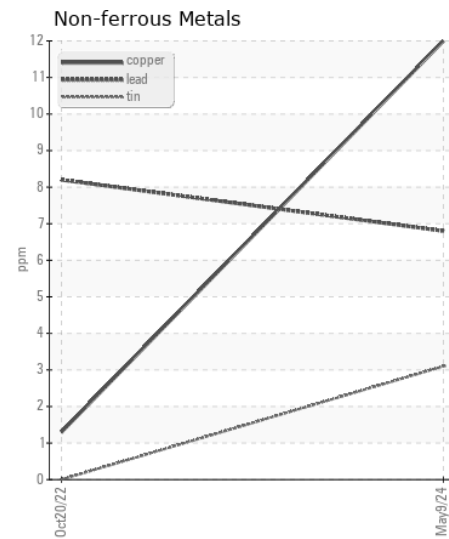
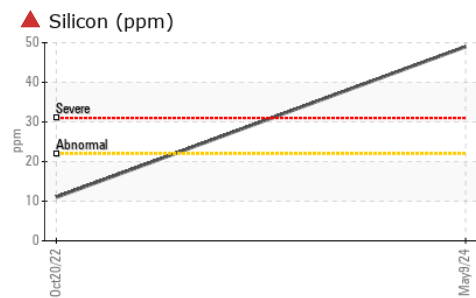
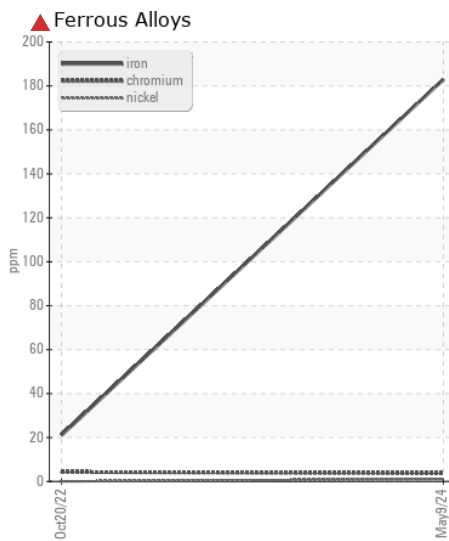
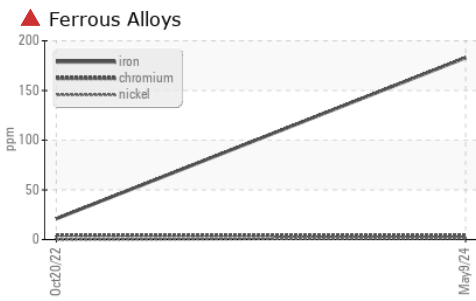
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>22	▲ 49	11	---
Potassium	ppm	ASTM D5185m	>20	6	7	---
Fuel		WC Method	>2.1	<1.0	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	1.4	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	15.5	9.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.7	24.1	---
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 higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	3	1	---
Boron	ppm	ASTM D5185m		249	205	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		414	65	---
Manganese	ppm	ASTM D5185m		3	<1	---
Magnesium	ppm	ASTM D5185m		1340	228	---
Calcium	ppm	ASTM D5185m		2677	2269	---
Phosphorus	ppm	ASTM D5185m		1476	968	---
Zinc	ppm	ASTM D5185m		1765	1196	---
Sulfur	ppm	ASTM D5185m		4385	3567	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.1	19.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	11.7	10.1	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 20.5	15.4	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211957 **Received** : 21 May 2024
Lab Number : 06185980 **Tested** : 22 May 2024
Unique Number : 11042732 **Diagnosed** : 23 May 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

JRE - ASHLAND
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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)