



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
[W49788]
 Machine Id
JOHN DEERE 544G DW544GD558708
 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. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0199711	JR0147149	---
Sample Date		Client Info		16 Feb 2024	09 Jan 2023	---
Machine Age	hrs	Client Info		16514	15967	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				ABNORMAL	SEVERE	---

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>51	▲ 129	▲ 55	---
Chromium	ppm	ASTM D5185m	>11	4	1	---
Nickel	ppm	ASTM D5185m	>5	7	4	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	● 11	4	---
Lead	ppm	ASTM D5185m	>26	15	4	---
Copper	ppm	ASTM D5185m	>26	6	1	---
Tin	ppm	ASTM D5185m	>4	4	2	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

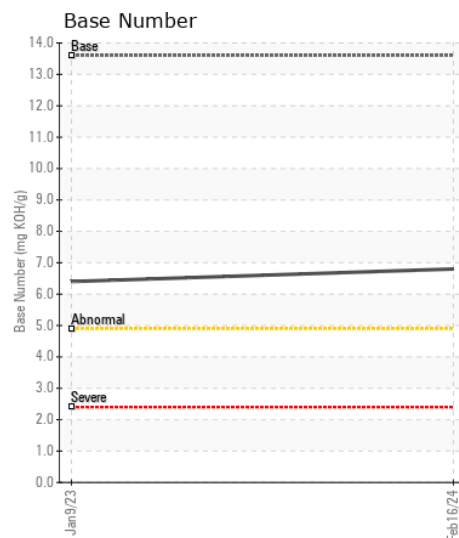
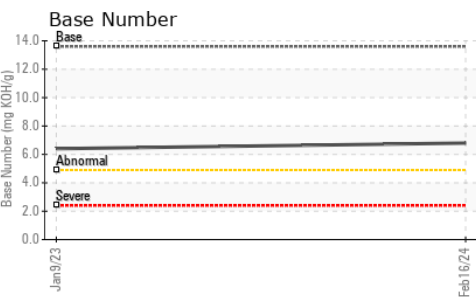
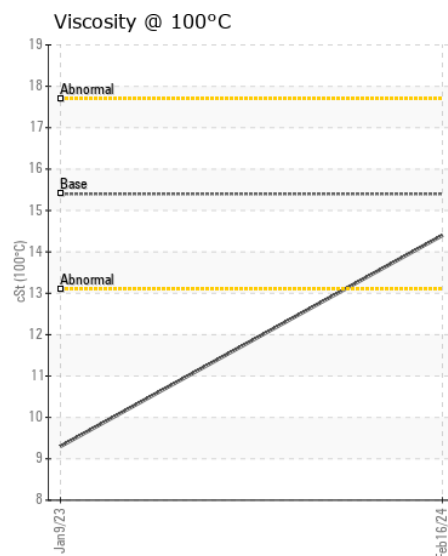
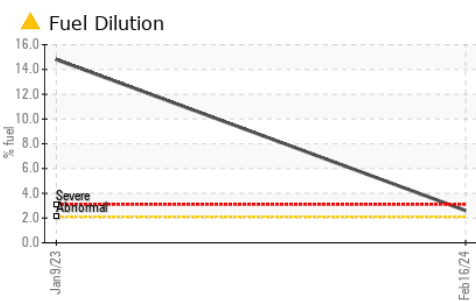
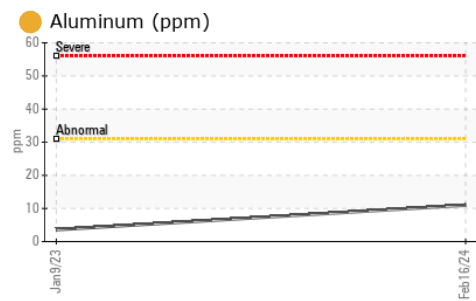
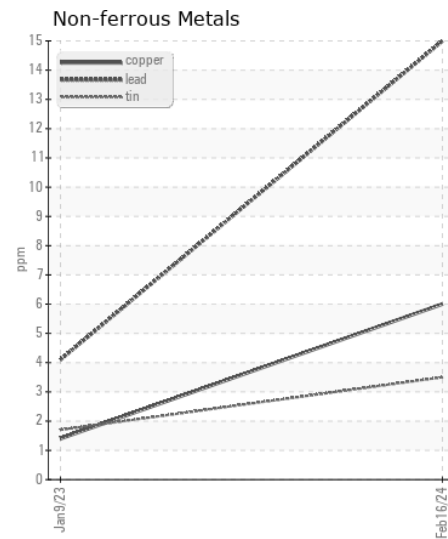
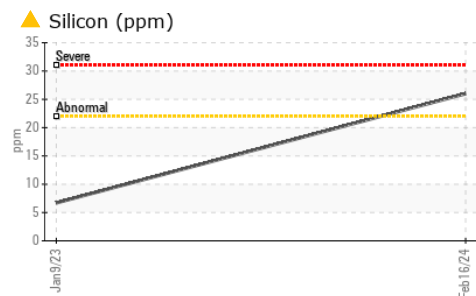
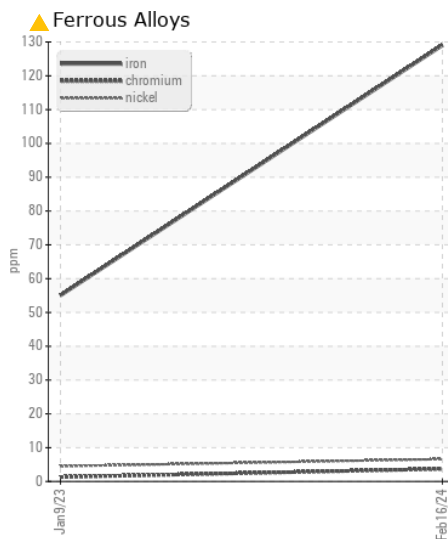
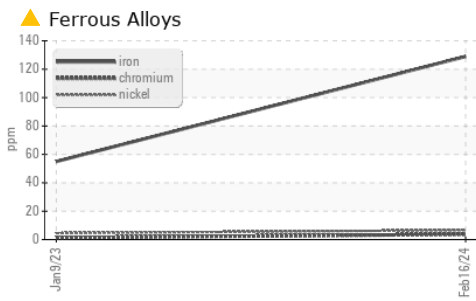
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>22	▲ 26	7	---
Potassium	ppm	ASTM D5185m	>20	5	1	---
Fuel	%	ASTM D3524	>2.1	▲ 2.6	▲ 14.8	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	1.2	0.7	---
Nitration	Abs/cm	*ASTM D7624	>20	14.0	12.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.4	22.8	---
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	34	5	---
Boron	ppm	ASTM D5185m		92	45	---
Barium	ppm	ASTM D5185m		2	0	---
Molybdenum	ppm	ASTM D5185m		167	65	---
Manganese	ppm	ASTM D5185m		2	<1	---
Magnesium	ppm	ASTM D5185m		449	322	---
Calcium	ppm	ASTM D5185m		1910	1759	---
Phosphorus	ppm	ASTM D5185m		948	818	---
Zinc	ppm	ASTM D5185m		1241	1008	---
Sulfur	ppm	ASTM D5185m		4061	2914	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.1	23.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.8	6.4	---
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	▲ 9.3	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0199711 **Received** : 27 Feb 2024
Lab Number : 06101460 **Tested** : 04 Mar 2024
Unique Number : 10899690 **Diagnosed** : 04 Mar 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: PercentFuel, 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)