



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 643L-II 1DW643LBANF714158

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0200313	JR0148206	---
Sample Date		Client Info		17 Jan 2024	29 Nov 2022	---
Machine Age	hrs	Client Info		1291	514	---
Oil Age	hrs	Client Info		0	514	---
Filter Age	hrs	Client Info		0	514	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	15	35	---
Chromium	ppm	ASTM D5185m	>11	<1	1	---
Nickel	ppm	ASTM D5185m	>5	9	4	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	4	6	---
Lead	ppm	ASTM D5185m	>26	0	<1	---
Copper	ppm	ASTM D5185m	>26	14	▲ 372	---
Tin	ppm	ASTM D5185m	>4	<1	2	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

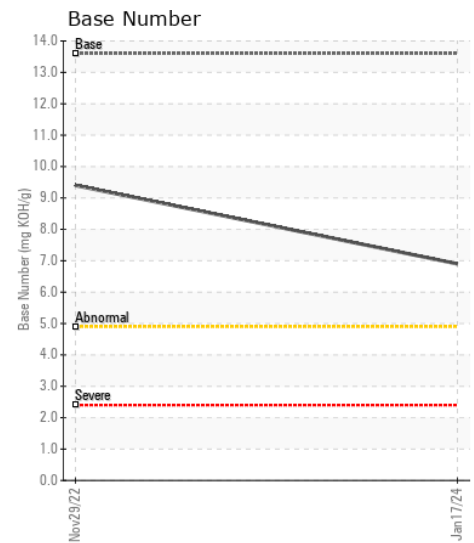
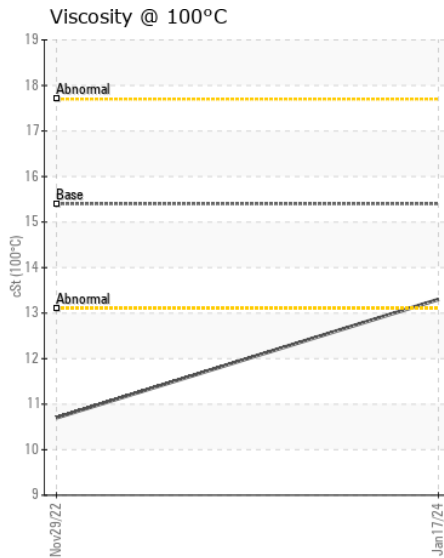
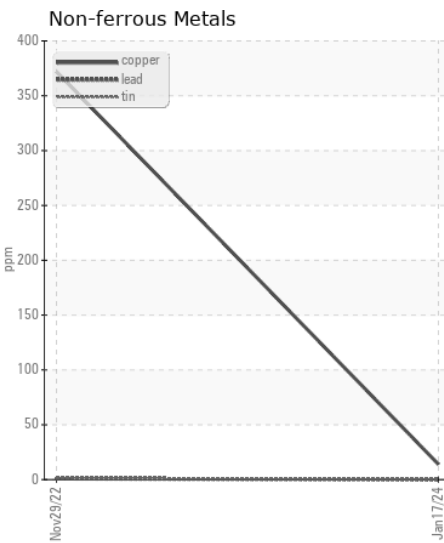
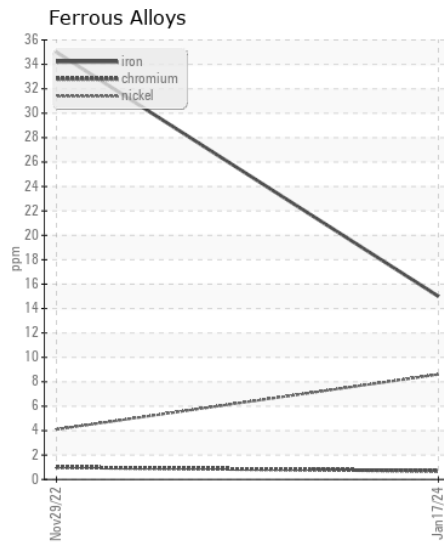
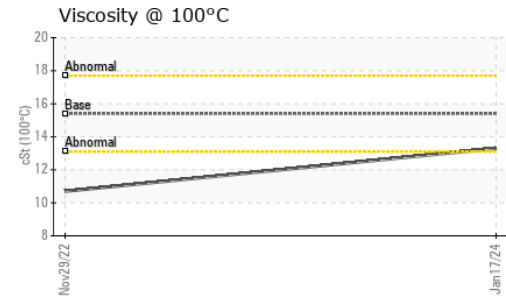
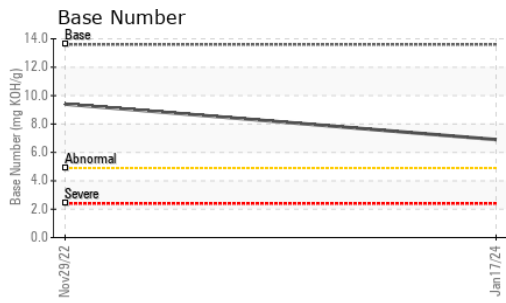
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	10	---
Potassium	ppm	ASTM D5185m	>20	5	11	---
Fuel		WC Method	>2.1	<1.0	0.4	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	8.8	10.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	24.3	---
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	2	5	---
Boron	ppm	ASTM D5185m		54	164	---
Barium	ppm	ASTM D5185m		0	2	---
Molybdenum	ppm	ASTM D5185m		103	246	---
Manganese	ppm	ASTM D5185m		<1	4	---
Magnesium	ppm	ASTM D5185m		253	714	---
Calcium	ppm	ASTM D5185m		2114	1666	---
Phosphorus	ppm	ASTM D5185m		1040	908	---
Zinc	ppm	ASTM D5185m		1292	1102	---
Sulfur	ppm	ASTM D5185m		3801	3374	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.0	19.7	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.9	9.4	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	▲ 10.7	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0200313 **Received** : 19 Jan 2024
Lab Number : 06065428 **Diagnosed** : 22 Jan 2024
Unique Number : 10836810 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: TBN)

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)

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