



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 644K 1DW644KZAED661834

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		JR0197515	JR0175156	---
Sample Date		Client Info		15 Jan 2024	18 May 2023	---
Machine Age	hrs	Client Info		11098	10147	---
Oil Age	hrs	Client Info		951	500	---
Filter Age	hrs	Client Info		0	500	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	12	14	---
Chromium	ppm	ASTM D5185m	>11	0	<1	---
Nickel	ppm	ASTM D5185m	>5	0	<1	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	3	3	---
Lead	ppm	ASTM D5185m	>26	<1	<1	---
Copper	ppm	ASTM D5185m	>26	<1	0	---
Tin	ppm	ASTM D5185m	>4	0	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

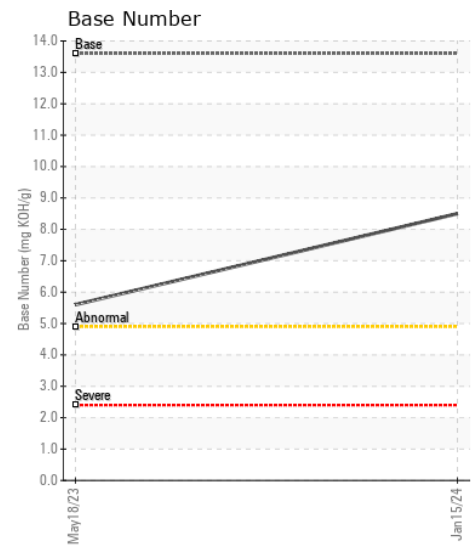
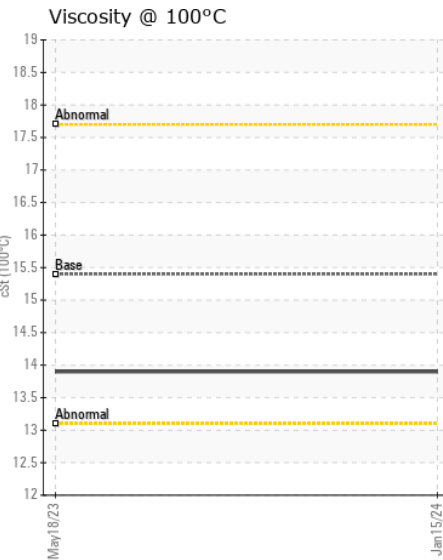
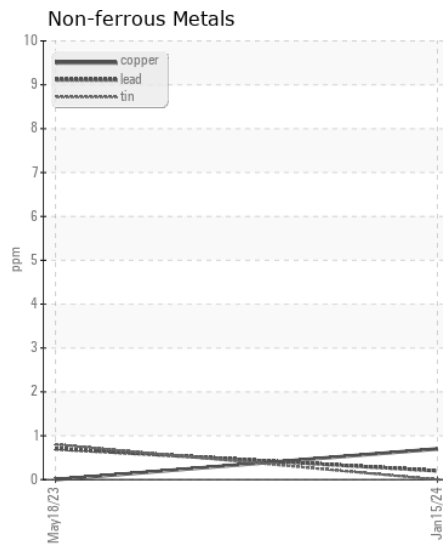
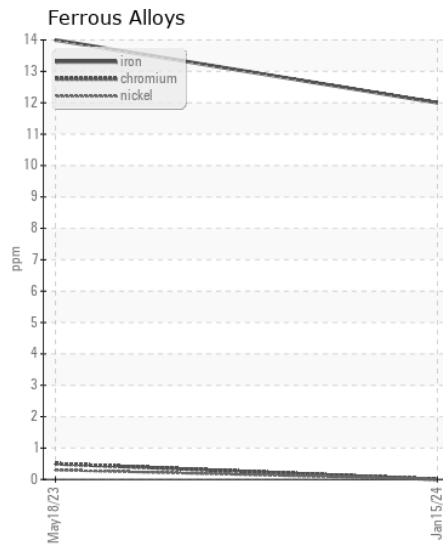
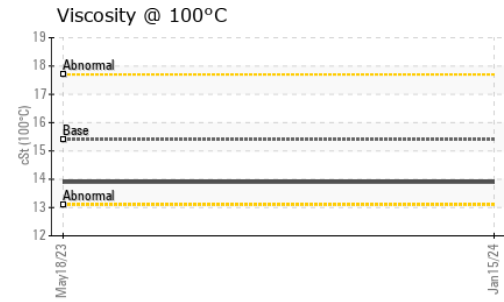
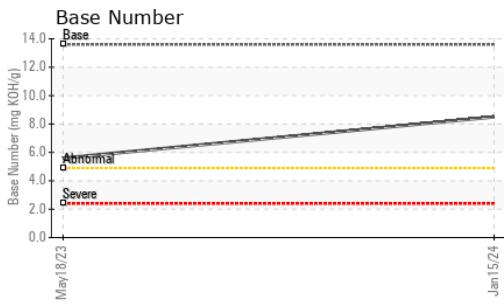
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	3	---
Potassium	ppm	ASTM D5185m	>20	<1	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	0.4	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	7.9	9.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	24.6	---
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	<1	2	---
Boron	ppm	ASTM D5185m		253	101	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		246	10	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		875	48	---
Calcium	ppm	ASTM D5185m		1467	2354	---
Phosphorus	ppm	ASTM D5185m		884	1075	---
Zinc	ppm	ASTM D5185m		1112	1331	---
Sulfur	ppm	ASTM D5185m		3089	4650	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	17.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.5	5.6	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.9	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0197515 **Received** : 17 Jan 2024
Lab Number : 06062508 **Diagnosed** : 18 Jan 2024
Unique Number : 10833890 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: TBN)

JRE - GARNER
 4161 AUBURN CHURCH RD
 GARNER, NC
 US 27529

Contact: RALEIGH SHOP
 sean.betts@jamesriverequipment.com; catherine.anastasio@wearcheck.com

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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