



Area

[W31849]

Machine Id

JOHN DEERE 944K 1DW944KXAML703645

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0121181	---	---
Sample Date		Client Info		11 Mar 2022	---	---
Machine Age	hrs	Client Info		238	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				ABNORMAL	---	---

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	36	---	---
Chromium	ppm	ASTM D5185m	>11	<1	---	---
Nickel	ppm	ASTM D5185m	>5	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m	>31	3	---	---
Lead	ppm	ASTM D5185m	>26	42	---	---
Copper	ppm	ASTM D5185m	>26	▲ 165	---	---
Tin	ppm	ASTM D5185m	>4	7	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

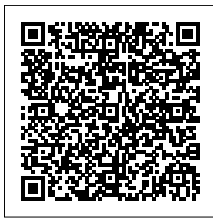
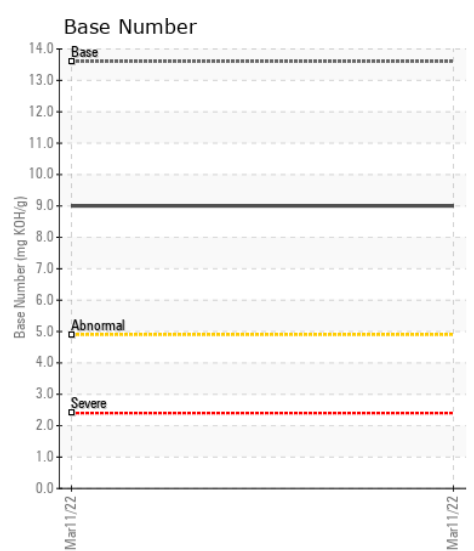
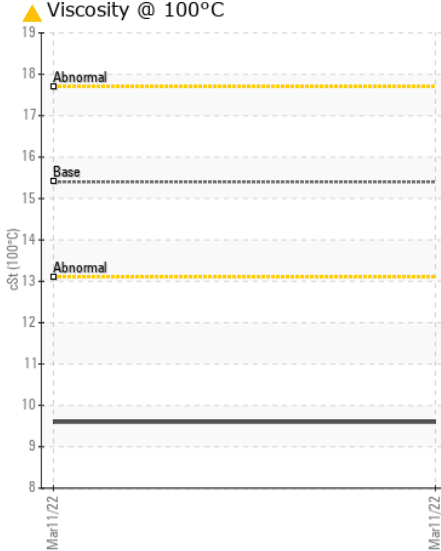
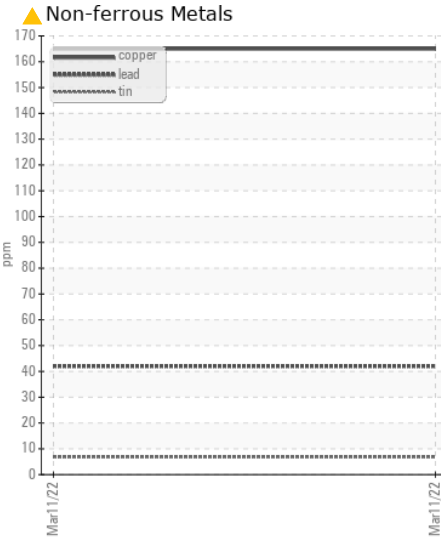
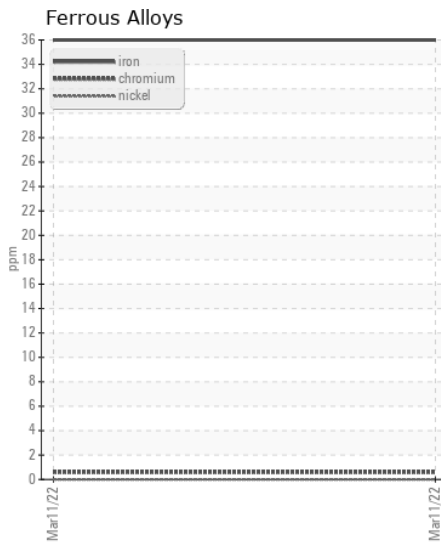
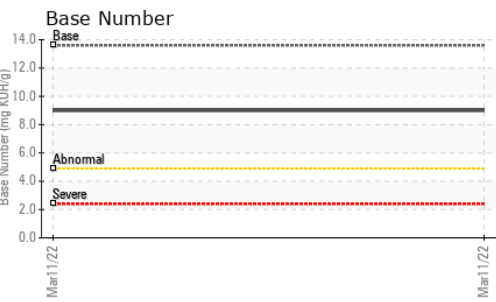
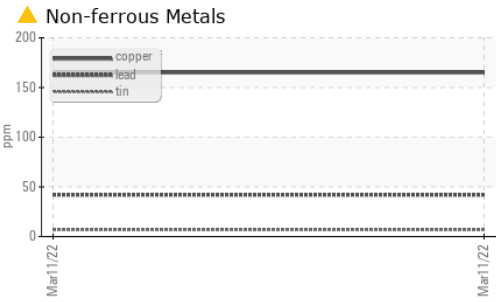
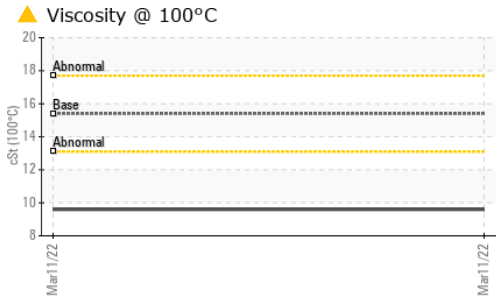
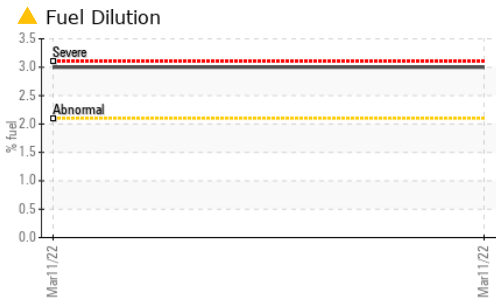
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>22	12	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Fuel	%	ASTM D3524	>2.1	▲ 3.0	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.4	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.6	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.21	NEG	---	---

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	<1	---	---
Boron	ppm	ASTM D5185m		112	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		236	---	---
Manganese	ppm	ASTM D5185m		9	---	---
Magnesium	ppm	ASTM D5185m		763	---	---
Calcium	ppm	ASTM D5185m		1451	---	---
Phosphorus	ppm	ASTM D5185m		861	---	---
Zinc	ppm	ASTM D5185m		988	---	---
Sulfur	ppm	ASTM D5185m		2417	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.0	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 9.6	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0121181 **Received** : 14 Mar 2022
Lab Number : 05490848 **Diagnosed** : 16 Mar 2022
Unique Number : 9890068 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

WAKE STONE CORP
 6811 HWY 64 EAST
 KNIGHTDALE, NC
 US 27545
 Contact: PAUL SPRUILL
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 T:
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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)