



WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

[05W46080]

Machine Id

JOHN DEERE 160G 1FF160GXPKF057672

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (18 QTS)

RECOMMENDATION

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		JR0211158	JR0037882	---
Sample Date		Client Info		11 Apr 2024	19 Mar 2020	---
Machine Age	hrs	Client Info		4338	487	---
Oil Age	hrs	Client Info		3851	487	---
Filter Age	hrs	Client Info		3851	487	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				SEVERE	ABNORMAL	---

WEAR

Piston, ring and cylinder wear is indicated. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>51	▲ 186	22	---
Chromium	ppm	ASTM D5185m	>11	3	<1	---
Nickel	ppm	ASTM D5185m	>5	2	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	▲ 21	9	---
Lead	ppm	ASTM D5185m	>26	▲ 241	4	---
Copper	ppm	ASTM D5185m	>26	▲ 43	▲ 71	---
Tin	ppm	ASTM D5185m	>4	4	1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

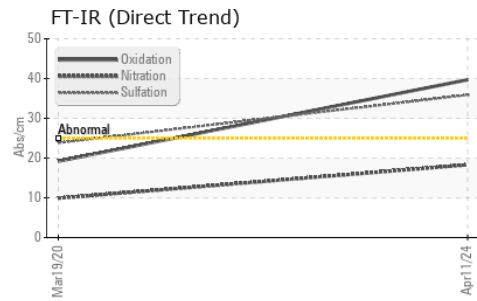
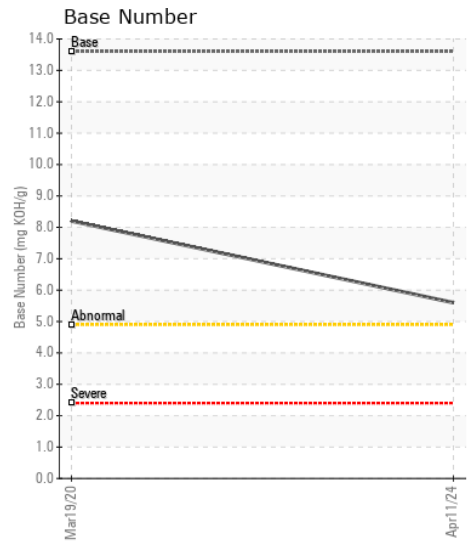
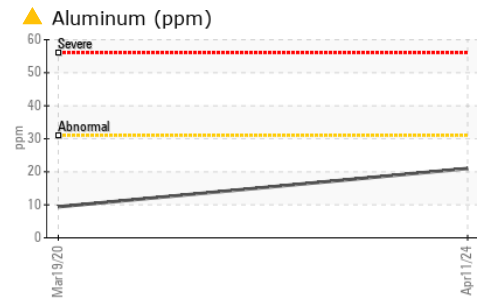
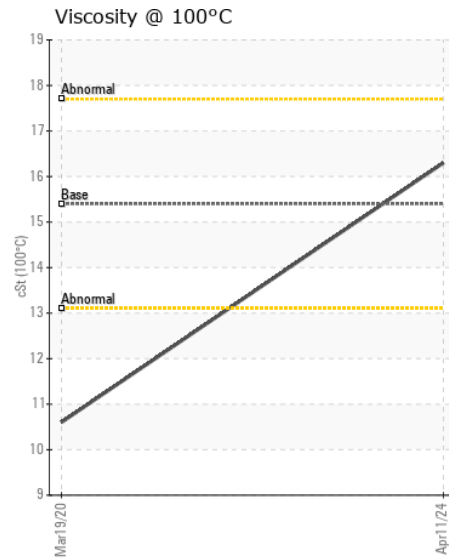
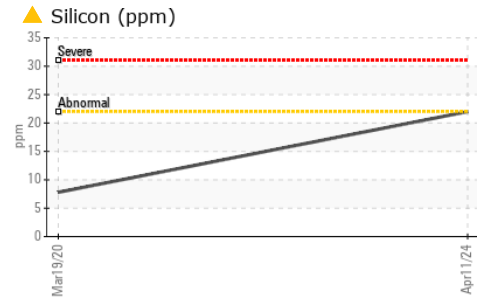
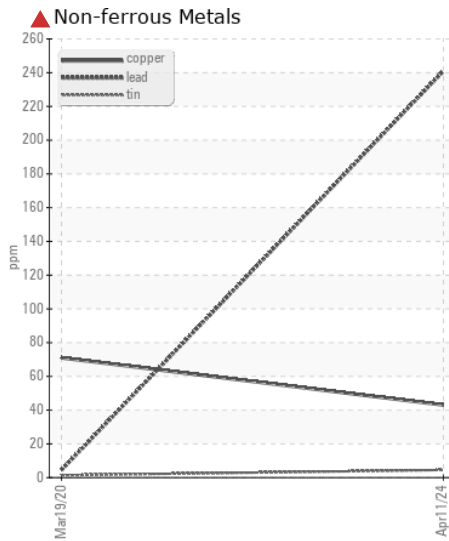
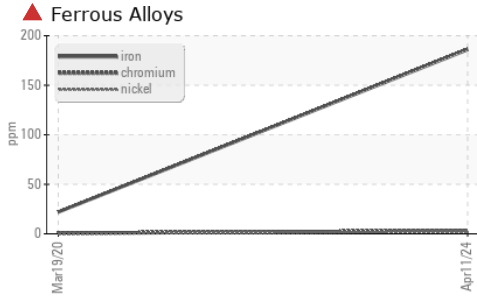
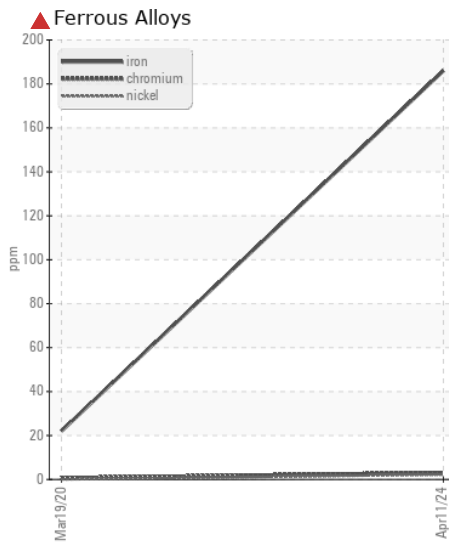
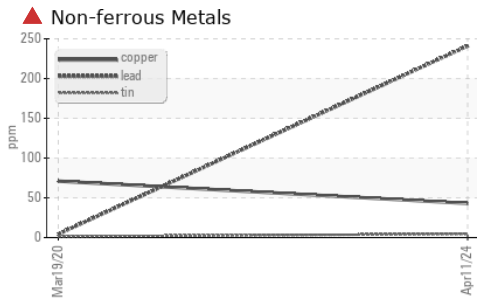
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>22	▲ 22	8	---
Potassium	ppm	ASTM D5185m	>20	3	3	---
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	1.3	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	18.3	9.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	35.9	23.8	---
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.

Sodium	ppm	ASTM D5185m	>31	10	7	---
Boron	ppm	ASTM D5185m		57	202	---
Barium	ppm	ASTM D5185m		<1	2	---
Molybdenum	ppm	ASTM D5185m		250	257	---
Manganese	ppm	ASTM D5185m		4	4	---
Magnesium	ppm	ASTM D5185m		1069	790	---
Calcium	ppm	ASTM D5185m		1955	1459	---
Phosphorus	ppm	ASTM D5185m		1281	820	---
Zinc	ppm	ASTM D5185m		1588	928	---
Sulfur	ppm	ASTM D5185m		3818	2215	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	39.7	19.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	5.6	8.2	---
Visc @ 100°C	cSt	ASTM D445	15.4	16.3	10.6	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211158 **Received** : 15 Apr 2024
Lab Number : 06149272 **Tested** : 16 Apr 2024
Unique Number : 10979350 **Diagnosed** : 17 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

JRE - MANASSAS PARK
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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)