



Area

[W66131-3]

Machine Id

JOHN DEERE 317G 1T0317GJTLJ370280

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. We recommend that you drain the oil from the component if this has not already been done. 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		JR0205468	JR0096495	---
Sample Date		Client Info		16 Apr 2024	16 Sep 2021	---
Machine Age	hrs	Client Info		2253	0	---
Oil Age	hrs	Client Info		0	500	---
Filter Age	hrs	Client Info		0	500	---
Oil Changed		Client Info		Not Changd	Changed	---
Filter Changed		Client Info		Not Changd	Changed	---
Sample Status				SEVERE	SEVERE	---

### WEAR

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

Iron	ppm	ASTM D5185m	>51	▲ 239	▲ 73	---
Chromium	ppm	ASTM D5185m	>11	▲ 7	2	---
Nickel	ppm	ASTM D5185m	>5	▲ 6	<1	---
Titanium	ppm	ASTM D5185m		1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	<1	---
Aluminum	ppm	ASTM D5185m	>31	▲ 67	● 12	---
Lead	ppm	ASTM D5185m	>26	▲ 43	3	---
Copper	ppm	ASTM D5185m	>26	▲ 50	▲ 118	---
Tin	ppm	ASTM D5185m	>4	3	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

### CONTAMINATION

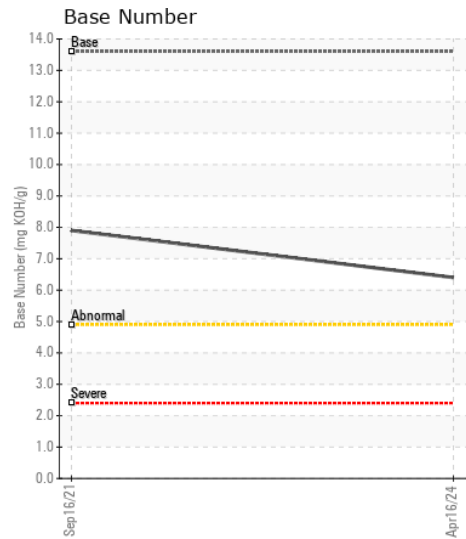
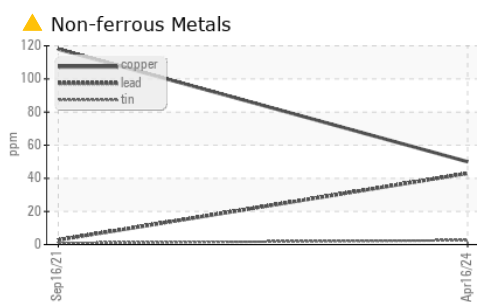
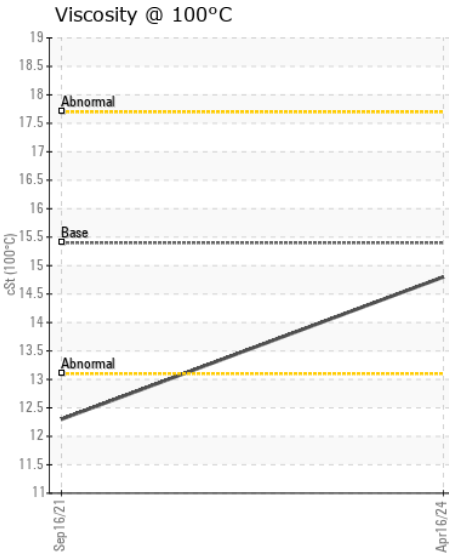
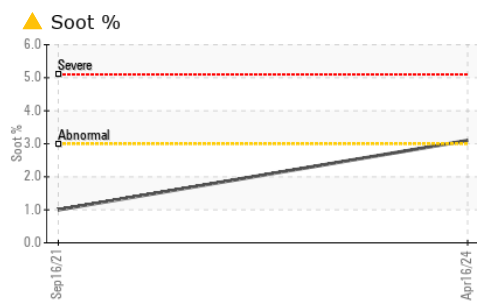
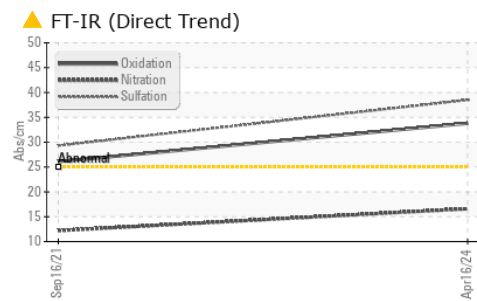
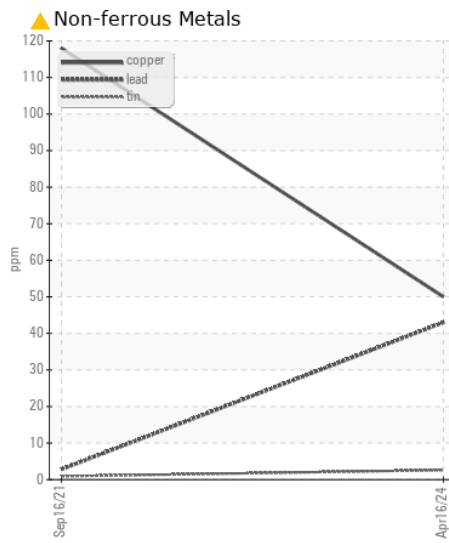
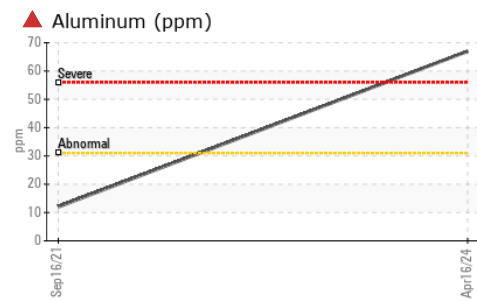
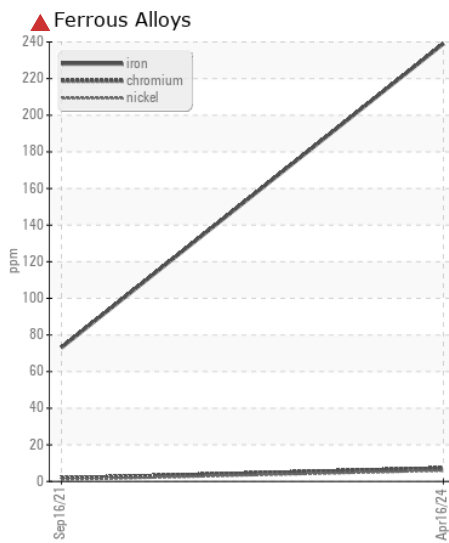
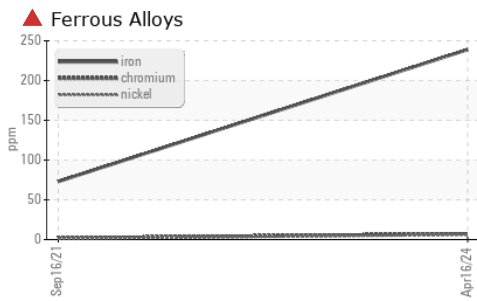
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>22	▲ 34	▲ 40	---
Potassium	ppm	ASTM D5185m	>20	4	2	---
Fuel	%	ASTM D3524	>2.1	<1.0	0.7	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	▲ 3.1	1	---
Nitration	Abs/cm	*ASTM D7624	>20	16.6	12.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	38.5	29.3	---
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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m	>31	7	9	---
Boron	ppm	ASTM D5185m		44	137	---
Barium	ppm	ASTM D5185m		2	0	---
Molybdenum	ppm	ASTM D5185m		358	262	---
Manganese	ppm	ASTM D5185m		4	2	---
Magnesium	ppm	ASTM D5185m		1134	773	---
Calcium	ppm	ASTM D5185m		2217	1851	---
Phosphorus	ppm	ASTM D5185m		1440	887	---
Zinc	ppm	ASTM D5185m		1654	1143	---
Sulfur	ppm	ASTM D5185m		4955	2714	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	33.8	26.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.4	7.9	---
Visc @ 100°C	cSt	ASTM D445	15.4	14.8	12.3	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0205468 **Received** : 18 Apr 2024  
**Lab Number** : 06152889 **Tested** : 19 Apr 2024  
**Unique Number** : 10982967 **Diagnosed** : 19 Apr 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, TBN )

**JRE - CHARLOTTE**  
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 F: (704)596-6198

Certificate L2367  
 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)