



Area

[TREX]

Machine Id

JOHN DEERE 318G 1T0318GALMJ395231

Component

Diesel Engine

Fluid

{not provided} (--- GAL)

### RECOMMENDATION

We advise that you check the fuel injection system. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0210412	JR0159430	---
Sample Date		Client Info		24 Jun 2024	20 Apr 2023	---
Machine Age	hrs	Client Info		2227	1191	---
Oil Age	hrs	Client Info		0	1191	---
Filter Age	hrs	Client Info		0	1191	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				SEVERE	SEVERE	---

### WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>51	▲ 104	▲ 144	---
Chromium	ppm	ASTM D5185m	>11	2	5	---
Nickel	ppm	ASTM D5185m	>5	1	1	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	● 13	● 20	---
Lead	ppm	ASTM D5185m	>26	21	▲ 42	---
Copper	ppm	ASTM D5185m	>26	27	▲ 61	---
Tin	ppm	ASTM D5185m	>4	1	1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

### CONTAMINATION

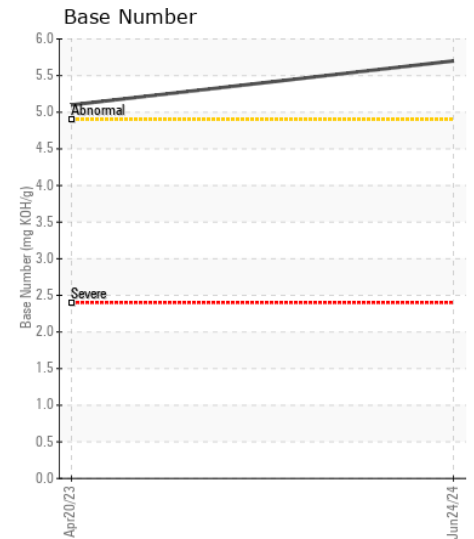
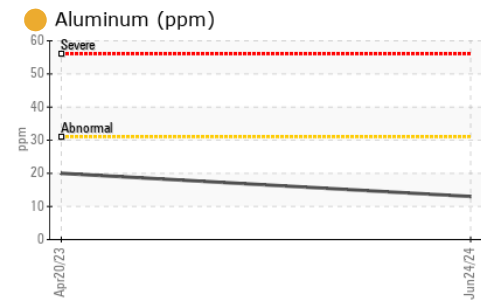
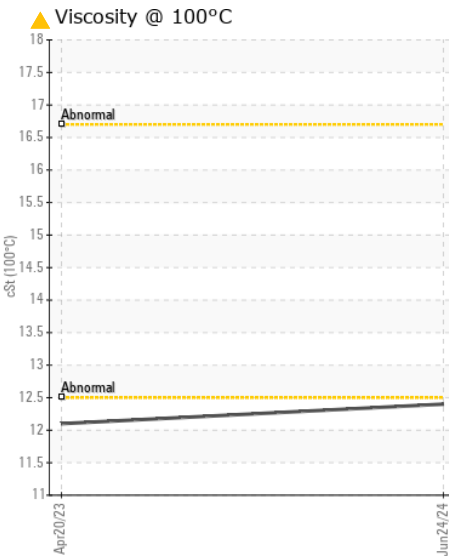
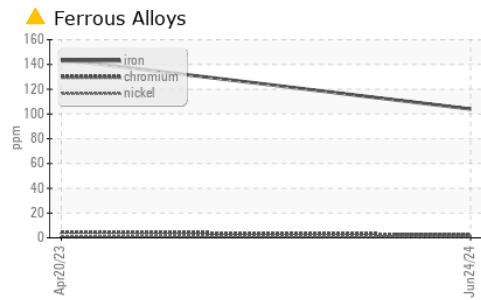
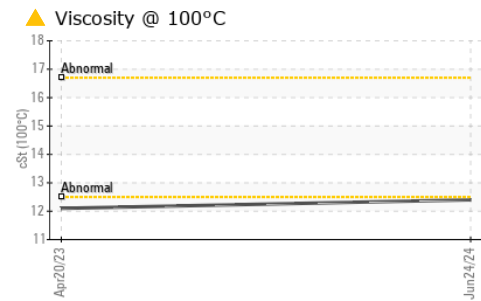
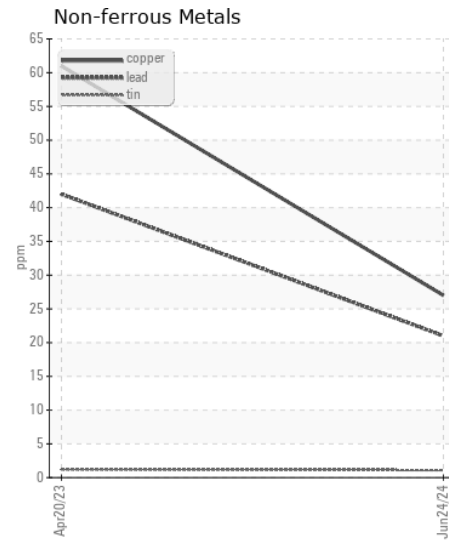
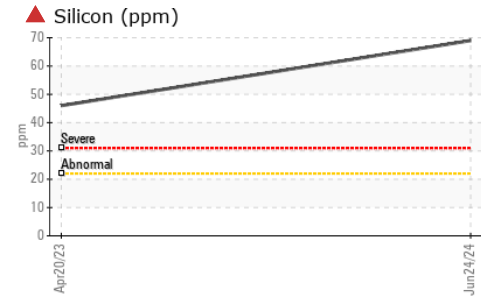
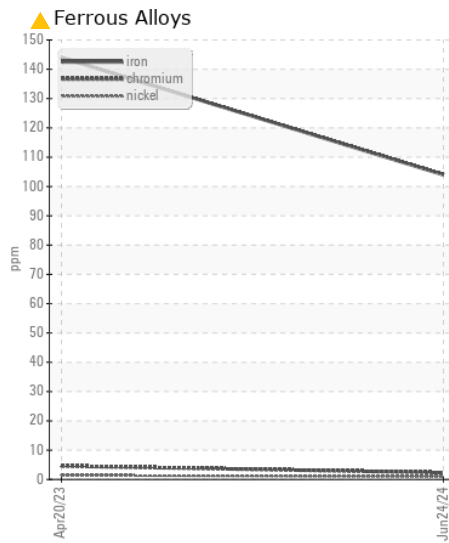
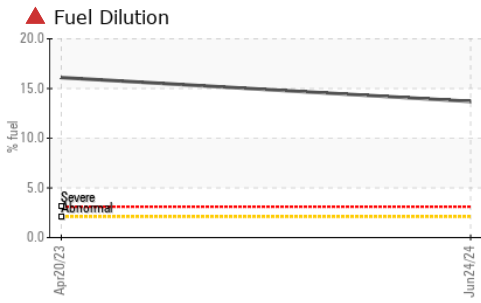
There is a high amount of fuel present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>22	▲ 69	▲ 46	---
Potassium	ppm	ASTM D5185m	>20	4	0	---
Fuel	%	ASTM D3524	>2.1	▲ 13.7	▲ 16.1	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	1	1.4	---
Nitration	Abs/cm	*ASTM D7624	>20	16.9	21.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	35.3	39.2	---
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

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	21	11	---
Boron	ppm	ASTM D5185m		113	72	---
Barium	ppm	ASTM D5185m		2	3	---
Molybdenum	ppm	ASTM D5185m		227	183	---
Manganese	ppm	ASTM D5185m		<1	3	---
Magnesium	ppm	ASTM D5185m		680	556	---
Calcium	ppm	ASTM D5185m		1747	1419	---
Phosphorus	ppm	ASTM D5185m		844	701	---
Zinc	ppm	ASTM D5185m		1172	904	---
Sulfur	ppm	ASTM D5185m		3437	3054	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	43.1	52.3	---
Base Number (BN)	mg KOH/g	ASTM D2896		5.7	5.1	---
Visc @ 100°C	cSt	ASTM D445		▲ 12.4	▲ 12.1	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0210412 **Received** : 26 Jun 2024  
**Lab Number** : 06220968 **Tested** : 01 Jul 2024  
**Unique Number** : 11099165 **Diagnosed** : 01 Jul 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

**JRE - STEPHENSON**  
 245 YARDMASTER COURT  
 STEPHENSON, VA  
 US 22656-1761  
 Contact: BRANDON BROWN  
 BRANDON.BROWN@JAMESRIVEREQUIPMENT.COM

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) F: (540)869-0549