



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310SK 1T0310SKJFE277140
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0207702	JR0020172	---
Sample Date		Client Info		31 May 2024	16 Feb 2021	---
Machine Age	hrs	Client Info		1480	1117	---
Oil Age	hrs	Client Info		1117	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Not Changed	---
Filter Changed		Client Info		Changed	Not Changed	---
Sample Status				ABNORMAL	NORMAL	---

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 component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	35	6	---
Chromium	ppm	ASTM D5185m	>11	2	<1	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		3	2	---
Silver	ppm	ASTM D5185m	>3	0	<1	---
Aluminum	ppm	ASTM D5185m	>31	3	1	---
Lead	ppm	ASTM D5185m	>26	1	<1	---
Copper	ppm	ASTM D5185m	>26	▲ 120	23	---
Tin	ppm	ASTM D5185m	>4	1	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

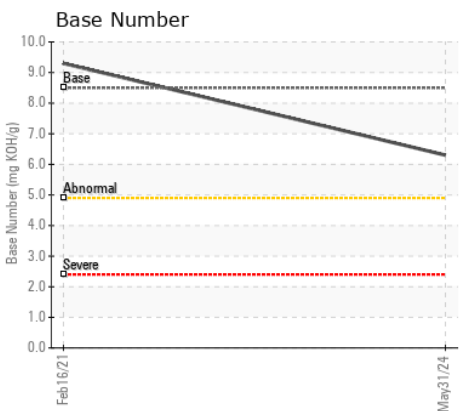
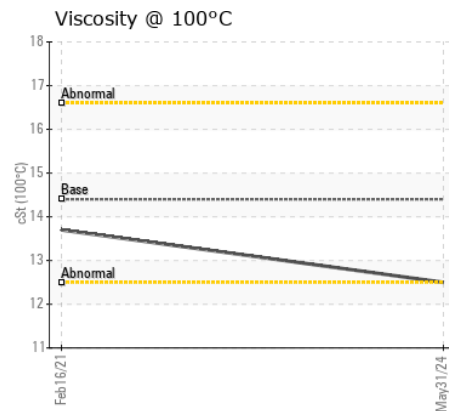
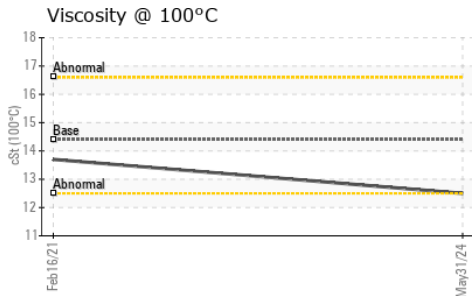
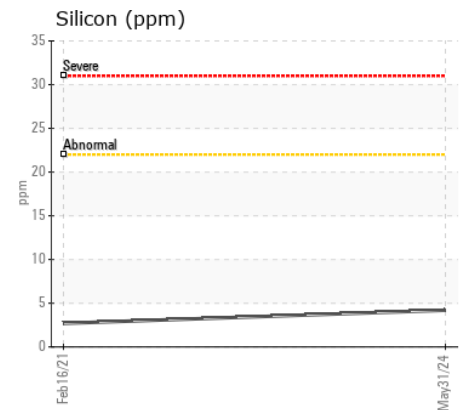
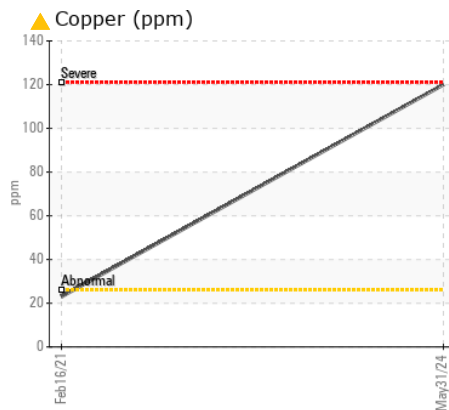
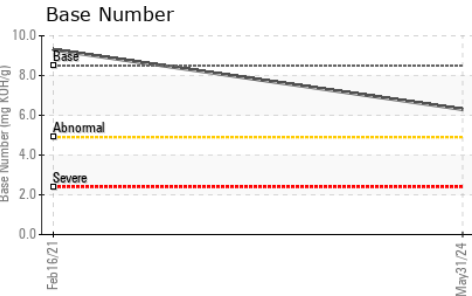
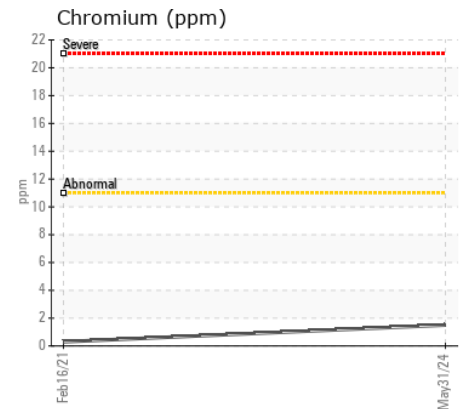
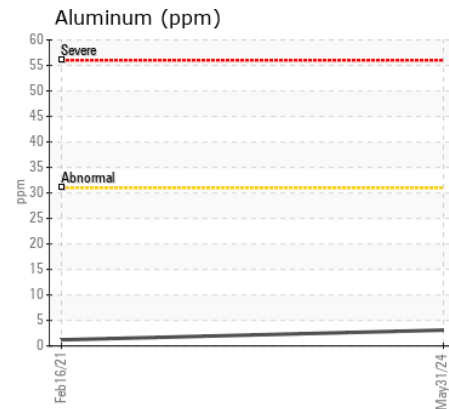
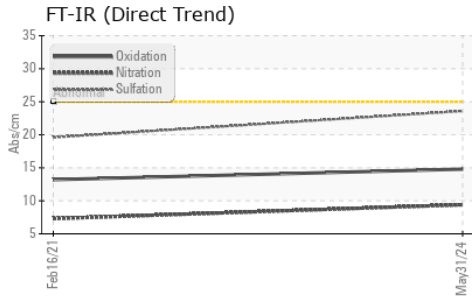
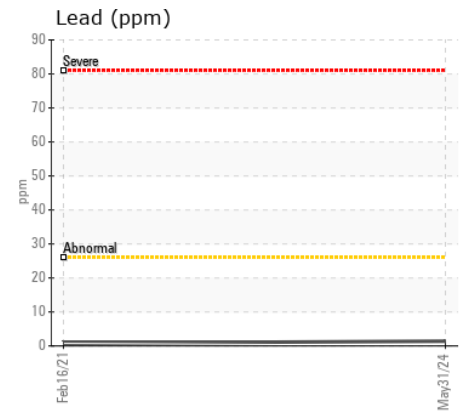
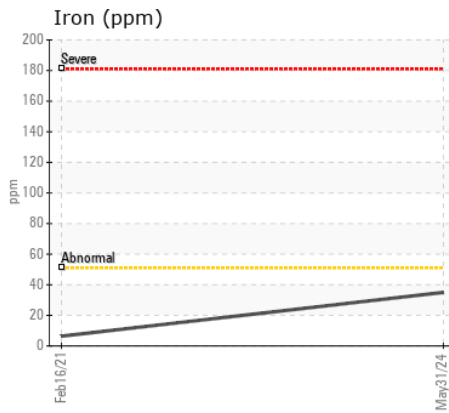
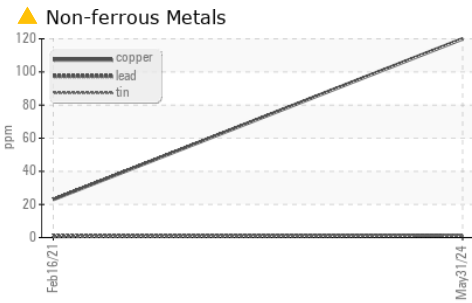
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	4	3	---
Potassium	ppm	ASTM D5185m	>20	4	1	---
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	0.8	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	9.4	7.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	19.6	---
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	>216	1	2	---
Boron	ppm	ASTM D5185m	250	40	74	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	17	13	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	450	677	674	---
Calcium	ppm	ASTM D5185m	3000	1266	1320	---
Phosphorus	ppm	ASTM D5185m	1150	1036	1051	---
Zinc	ppm	ASTM D5185m	1350	1199	1174	---
Sulfur	ppm	ASTM D5185m	4250	3701	3331	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	13.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.3	9.3	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.5	13.7	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0207702 **Received** : 03 Jun 2024
Lab Number : 06197467 **Tested** : 04 Jun 2024
Unique Number : 11059590 **Diagnosed** : 04 Jun 2024 - Don Baldrige
Test Package : MOBCE (Additional Tests: TBN)

JRE - SALEM
 3902 W. MAIN STREET
 SALEM, VA
 US 24153

Contact: ROBERT SMITH
 ROBERT.SMITH@JAMESRIVEREQUIPMENT.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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