



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 310L 1T0310LXLJF340157
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- 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. Note that there appears to be a discrepancy in the total time on this component, when compared to the historical data.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0212118	JR0199728	JR0147495
Sample Date		Client Info		29 May 2024	07 Mar 2024	22 Sep 2022
Machine Age	hrs	Client Info		3246	3809	2428
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

The lead level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	17	▲ 60	16
Chromium	ppm	ASTM D5185m	>11	<1	2	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	7	10	4
Lead	ppm	ASTM D5185m	>26	▲ 49	▲ 41	19
Copper	ppm	ASTM D5185m	>26	3	9	4
Tin	ppm	ASTM D5185m	>4	2	3	1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

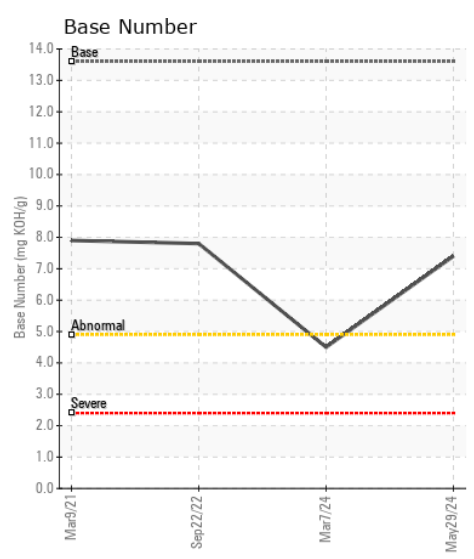
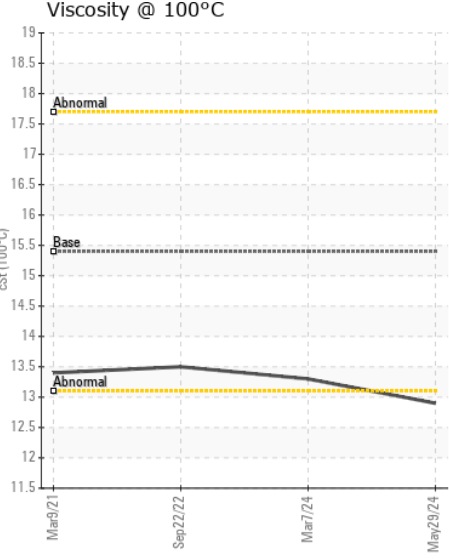
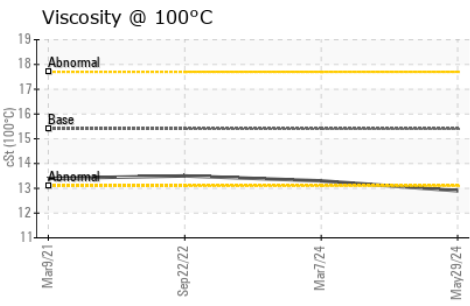
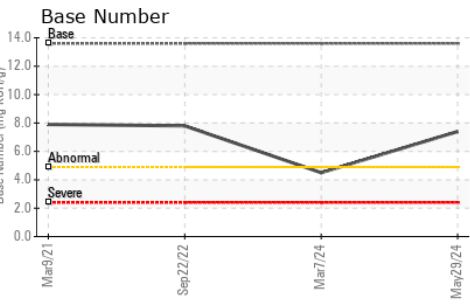
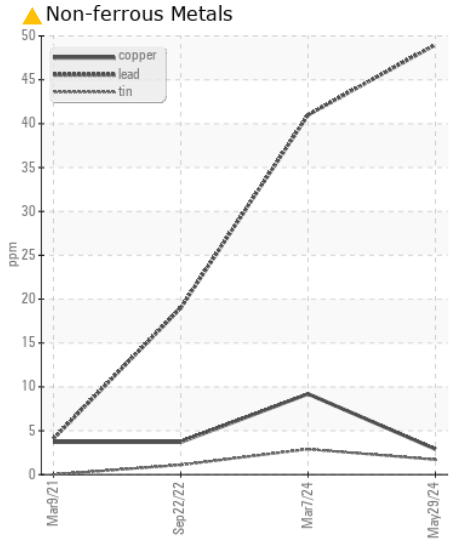
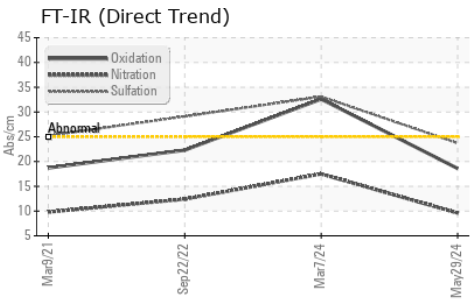
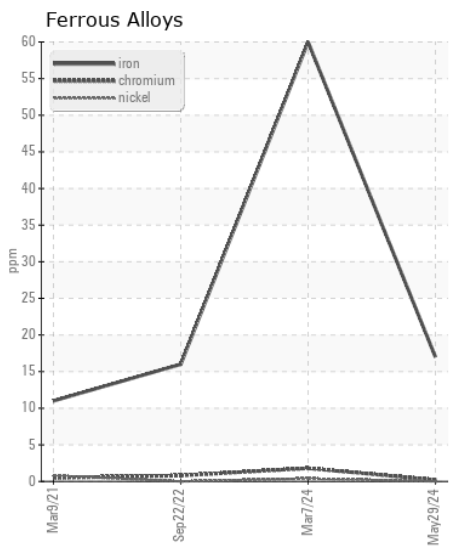
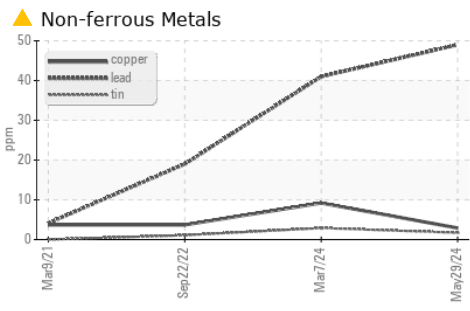
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	11	9	7
Potassium	ppm	ASTM D5185m	>20	1	3	<1
Fuel	%	ASTM D3524	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.6	17.5	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.7	33.1	29.1
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	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	>31	3	2	2
Boron	ppm	ASTM D5185m		63	26	55
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		248	262	218
Manganese	ppm	ASTM D5185m		2	5	2
Magnesium	ppm	ASTM D5185m		840	820	753
Calcium	ppm	ASTM D5185m		1479	1521	1412
Phosphorus	ppm	ASTM D5185m		839	841	666
Zinc	ppm	ASTM D5185m		992	1037	840
Sulfur	ppm	ASTM D5185m		3530	3114	3120
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	32.6	22.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.4	4.5	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	12.9	13.3	13.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0212118 **Received** : 30 May 2024
Lab Number : 06195299 **Tested** : 31 May 2024
Unique Number : 11057422 **Diagnosed** : 01 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, TBN)

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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)