



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[COUNTY OF WARREN]

Machine Id

JOHN DEERE 310SL 1T0310SLLHF315137

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0194953	JR0169815	JR0120288
Sample Date		Client Info		23 Feb 2024	30 May 2023	22 Jul 2022
Machine Age	hrs	Client Info		4006	3520	2998
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	12	17	16
Chromium	ppm	ASTM D5185m	>11	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	5	2	3
Lead	ppm	ASTM D5185m	>26	4	11	6
Copper	ppm	ASTM D5185m	>26	2	2	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

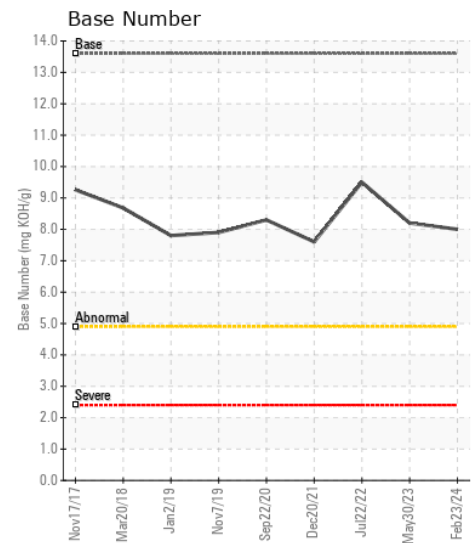
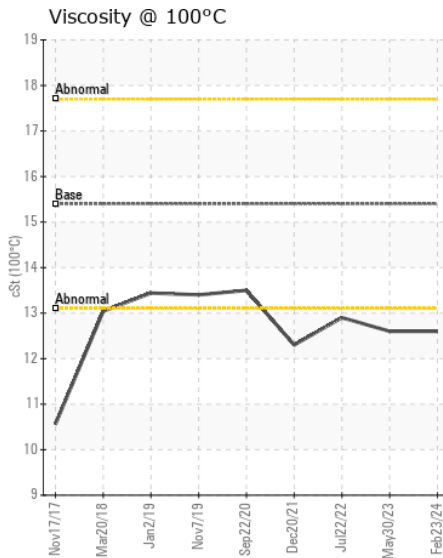
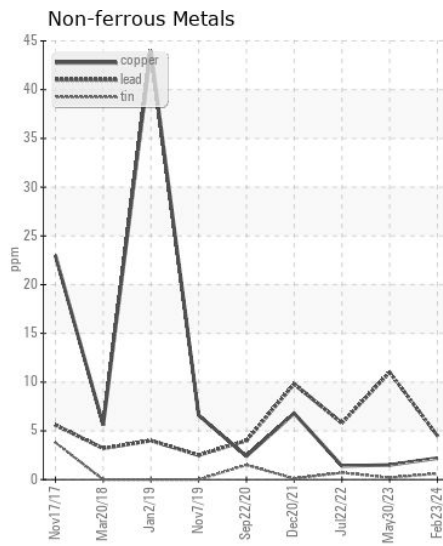
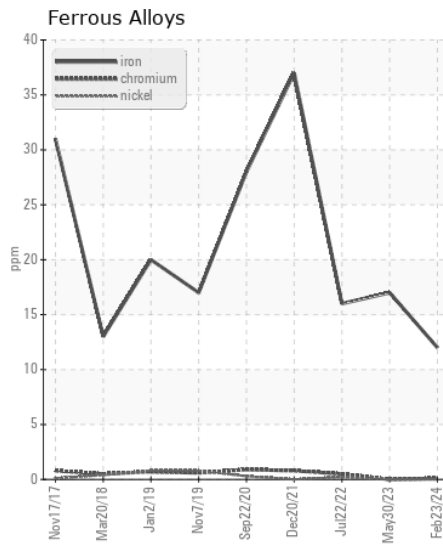
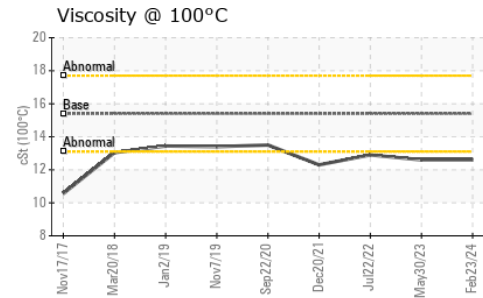
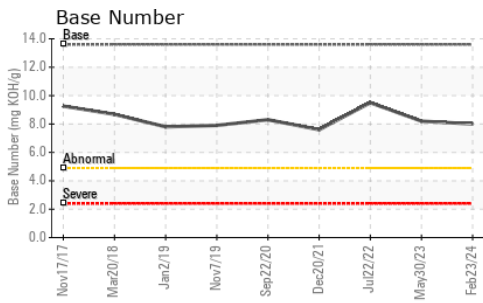
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	6	6
Potassium	ppm	ASTM D5185m	>20	<1	4	0
Fuel		WC Method	>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	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.8	10.1	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	22.6	23.8
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	1	0	2
Boron	ppm	ASTM D5185m		181	218	196
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		228	260	239
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		784	738	786
Calcium	ppm	ASTM D5185m		1327	1509	1496
Phosphorus	ppm	ASTM D5185m		869	898	862
Zinc	ppm	ASTM D5185m		1071	1048	1040
Sulfur	ppm	ASTM D5185m		2885	3224	3510
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	18.2	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.0	8.2	9.5
Visc @ 100°C	cSt	ASTM D445	15.4	12.6	12.6	12.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0194953

Lab Number : 06105897

Unique Number : 10909394

Test Package : CONST (Additional Tests: TBN)

Received : 01 Mar 2024

Tested : 04 Mar 2024

Diagnosed : 04 Mar 2024 - Don Baldrige

JRE - STEPHENSON

245 YARDMASTER COURT

STEPHENSON, VA

US 22656-1761

Contact: PHIL DAUGHERTY

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T: x:

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)693-2588