



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 310SL 1T0310SLCHF318883

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0199992	JR0180604	JR0179178
Sample Date		Client Info		21 Feb 2024	14 Dec 2023	03 Oct 2023
Machine Age	hrs	Client Info		12450	11961	11508
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	8	10	10
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	5	4
Lead	ppm	ASTM D5185m	>26	2	2	5
Copper	ppm	ASTM D5185m	>26	<1	<1	0
Tin	ppm	ASTM D5185m	>4	<1	<1	<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

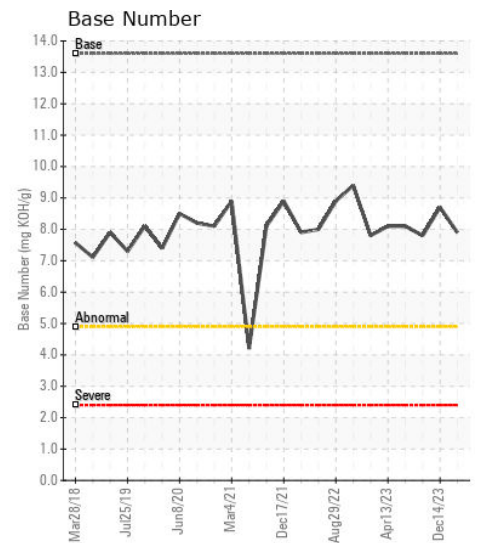
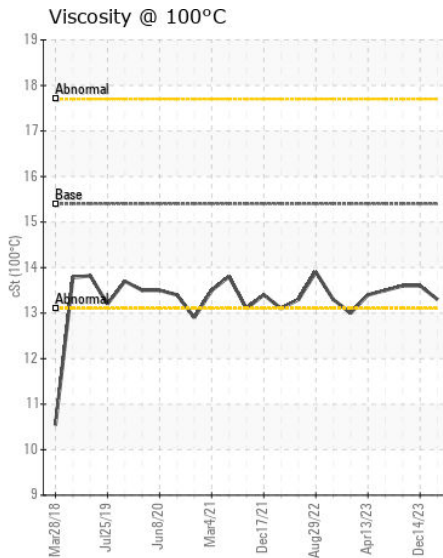
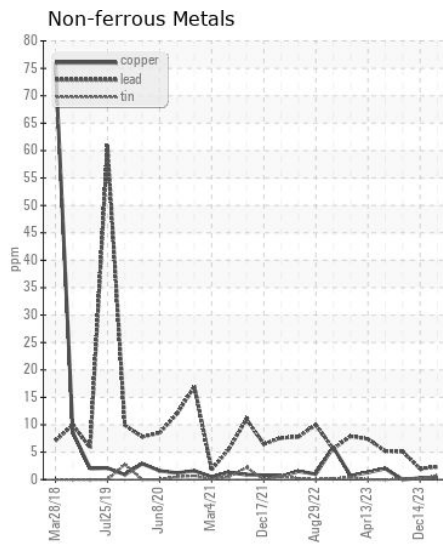
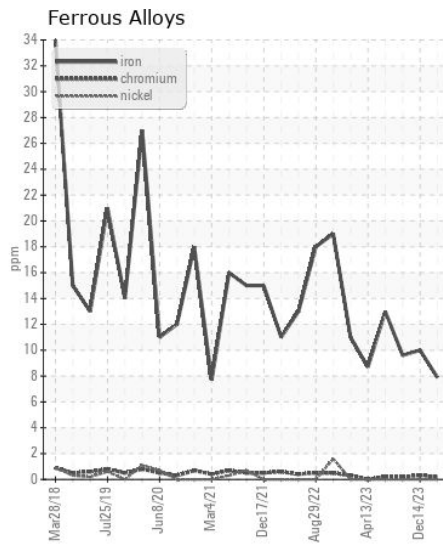
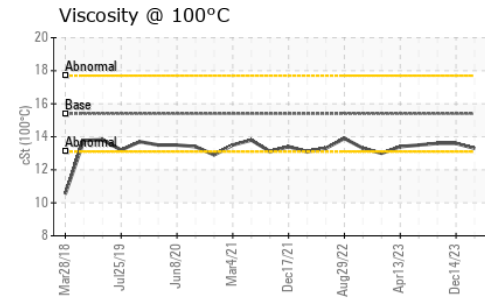
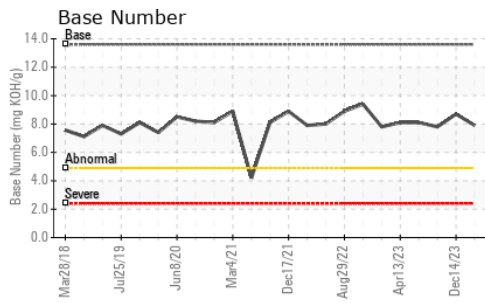
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	6	7	8
Potassium	ppm	ASTM D5185m	>20	0	1	<1
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	8.9	8.7	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.2	22.0	21.5
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	<1	1	0
Boron	ppm	ASTM D5185m		215	259	247
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		233	265	268
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		764	888	913
Calcium	ppm	ASTM D5185m		1324	1525	1504
Phosphorus	ppm	ASTM D5185m		852	991	982
Zinc	ppm	ASTM D5185m		1016	1179	1197
Sulfur	ppm	ASTM D5185m		2909	3468	3384
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	17.3	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.9	8.7	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.6	13.6



Certificate L2367

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

Sample No. : JR0199992

Lab Number : 06097402

Unique Number : 10890255

Test Package : CONST (Additional Tests: TBN)

Received : 22 Feb 2024

Tested : 23 Feb 2024

Diagnosed : 23 Feb 2024 - Wes Davis

JRE - ASHLAND

11047 LEADBETTER RD

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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)