



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 310SL 1T0310SLAKF356390

Component
Diesel Engine

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

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		JR0207800	JR0117547	JR0094216
Sample Date		Client Info		03 May 2024	14 Jan 2022	28 Jul 2021
Machine Age	hrs	Client Info		1528	813	693
Oil Age	hrs	Client Info		715	120	693
Filter Age	hrs	Client Info		715	120	693
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>51	25	8	48
Chromium	ppm	ASTM D5185m	>11	1	<1	2
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>31	9	3	5
Lead	ppm	ASTM D5185m	>26	▲ 72	4	36
Copper	ppm	ASTM D5185m	>26	9	9	▲ 155
Tin	ppm	ASTM D5185m	>4	2	1	5
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

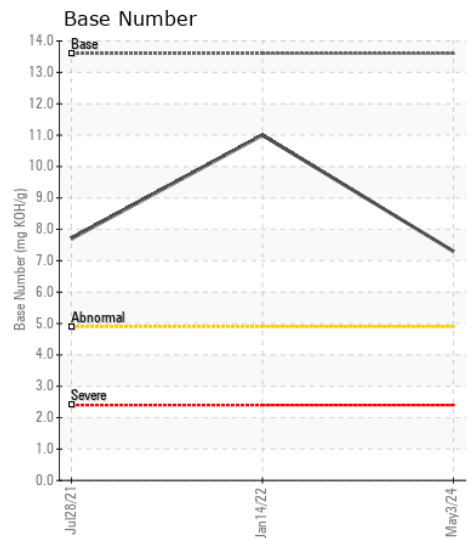
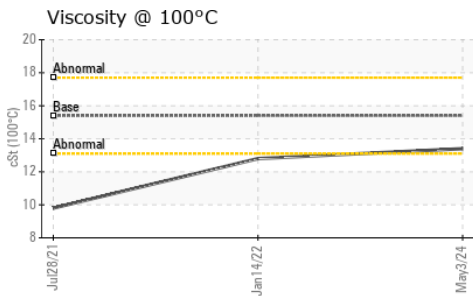
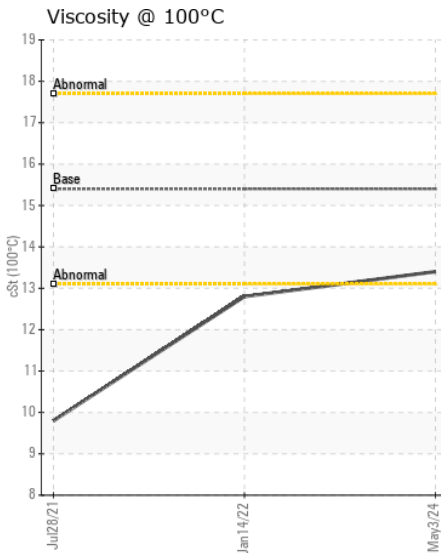
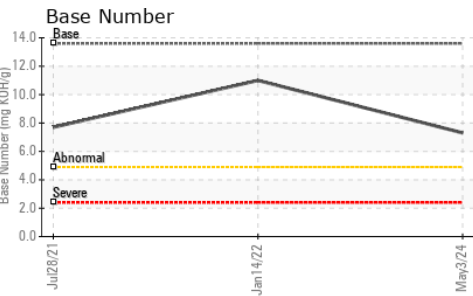
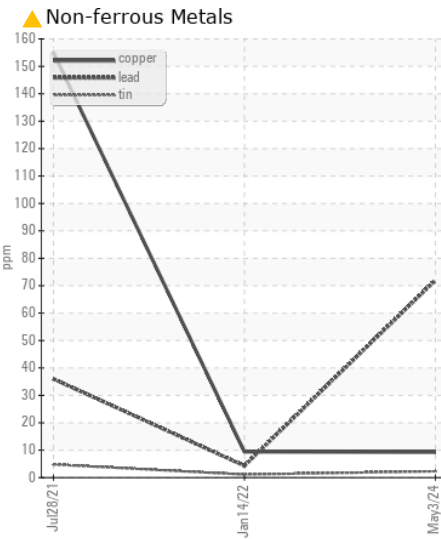
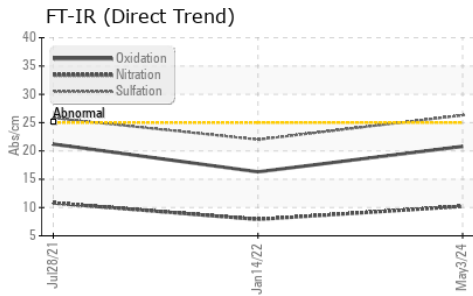
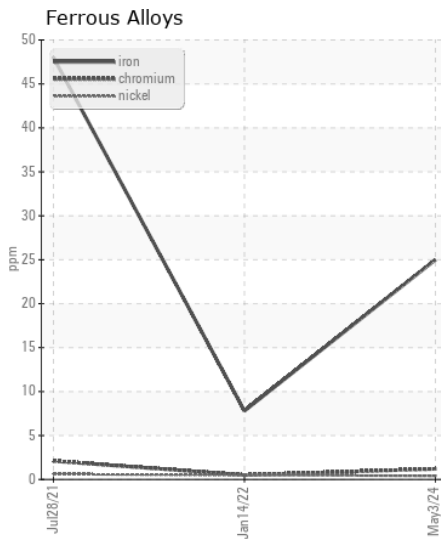
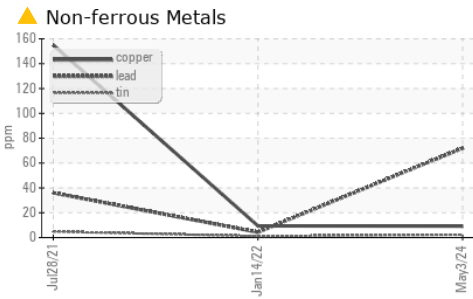
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	13	8	18
Potassium	ppm	ASTM D5185m	>20	3	2	5
Fuel		WC Method	>2.1	<1.0	<1.0	0.9
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	10.2	7.9	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	22.0	25.8
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 suitable for further service.

Sodium	ppm	ASTM D5185m	>31	3	2	5
Boron	ppm	ASTM D5185m		182	240	122
Barium	ppm	ASTM D5185m		1	0	5
Molybdenum	ppm	ASTM D5185m		377	244	306
Manganese	ppm	ASTM D5185m		2	1	10
Magnesium	ppm	ASTM D5185m		1152	777	925
Calcium	ppm	ASTM D5185m		2081	1402	1734
Phosphorus	ppm	ASTM D5185m		1239	868	886
Zinc	ppm	ASTM D5185m		1486	1057	1068
Sulfur	ppm	ASTM D5185m		4535	2944	2709
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8	16.3	21.2
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.3	11.0	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	12.8	● 9.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0207800 **Received** : 09 May 2024
Lab Number : 06174917 **Tested** : 10 May 2024
Unique Number : 11020970 **Diagnosed** : 13 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

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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)