



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

[W52765]

Machine Id

JOHN DEERE 310E 1DW310EXEJF685830

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		JR0224896	JR0165356	JR0147124
Sample Date		Client Info		28 Jun 2024	11 Jul 2023	23 Jan 2023
Machine Age	hrs	Client Info		4905	4460	4064
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	41	22	25
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	7	4	4
Lead	ppm	ASTM D5185m	>26	<1	<1	1
Copper	ppm	ASTM D5185m	>26	1	2	<1
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

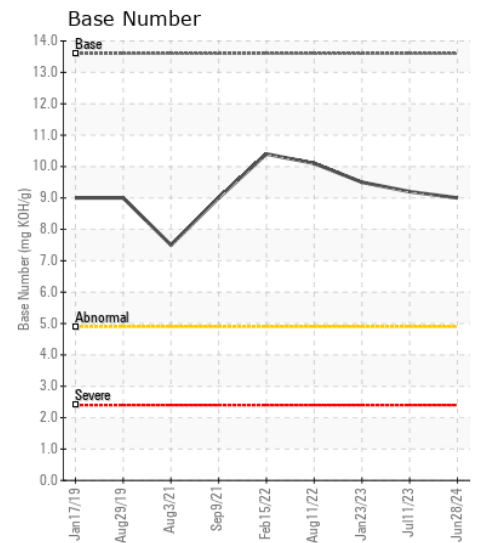
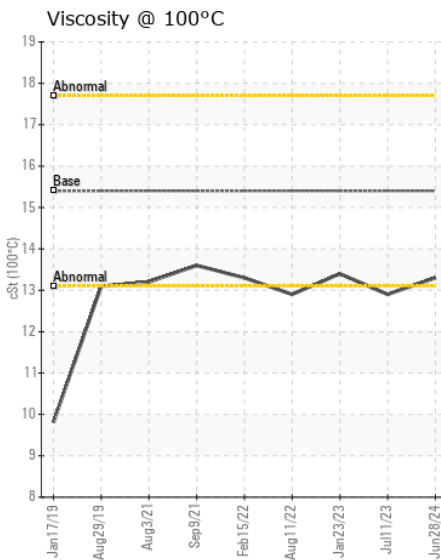
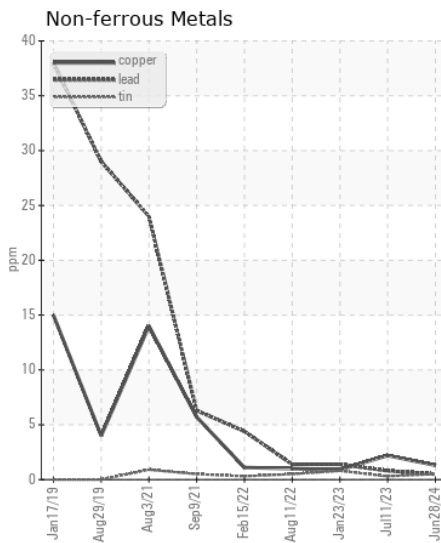
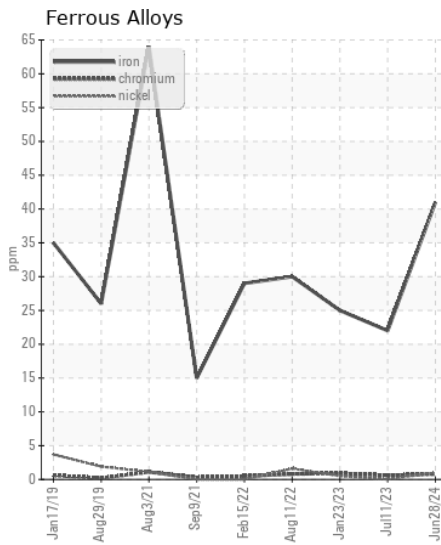
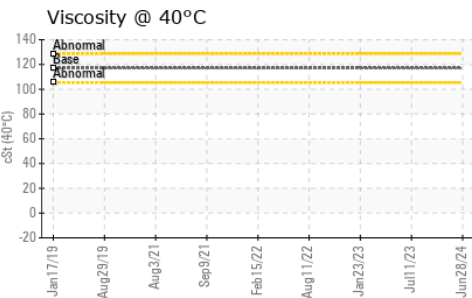
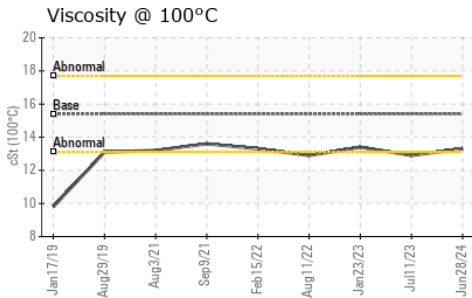
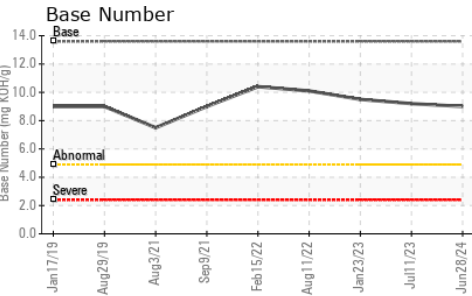
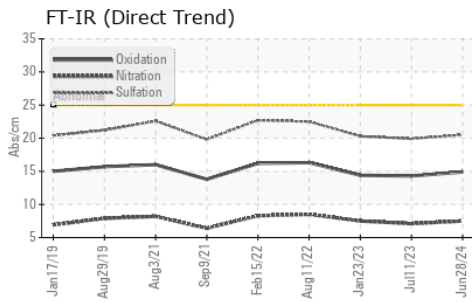
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	8	8	8
Potassium	ppm	ASTM D5185m	>20	3	2	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	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.5	7.1	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	19.9	20.3
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	2	2
Boron	ppm	ASTM D5185m		249	289	235
Barium	ppm	ASTM D5185m		2	0	5
Molybdenum	ppm	ASTM D5185m		265	244	239
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		779	878	769
Calcium	ppm	ASTM D5185m		1381	1573	1452
Phosphorus	ppm	ASTM D5185m		814	966	861
Zinc	ppm	ASTM D5185m		1028	1153	1066
Sulfur	ppm	ASTM D5185m		2613	3937	3370
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	14.3	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.0	9.2	9.5
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	12.9	13.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0224896 **Received** : 02 Jul 2024
Lab Number : 06225825 **Tested** : 03 Jul 2024
Unique Number : 11109318 **Diagnosed** : 03 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: KV40, TBN)

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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