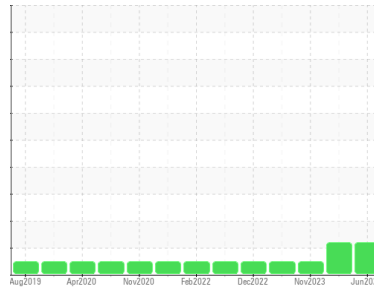


OIL ANALYSIS REPORT



Machine Id
JOHN DEERE 310E 1DW310EXHJF691304
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

Sample Rating Trend



GLYCOL



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain high. Test for glycol is negative.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			JR0221389	JR0221303	JR0192276
Sample Date	Client Info			25 Jun 2024	17 May 2024	30 Nov 2023
Machine Age	hrs	Client Info		6031	5988	5466
Oil Age	hrs	Client Info		0	0	503
Oil Changed	Client Info			Not Chngd	Changed	N/A
Sample Status				ATTENTION	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>2.1		<1.0	<1.0	<1.0
Water	WC Method	>0.21		NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	4	35	24
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	4	7	4
Lead	ppm	ASTM D5185m	>26	0	<1	0
Copper	ppm	ASTM D5185m	>26	<1	4	1
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

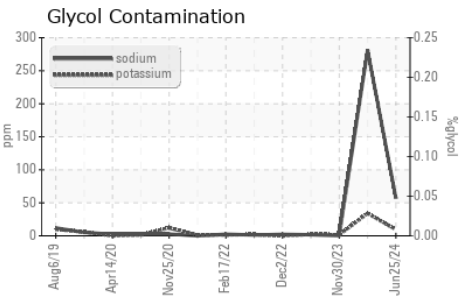
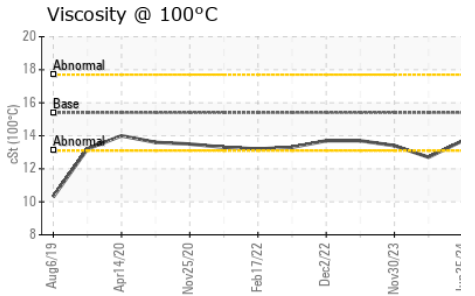
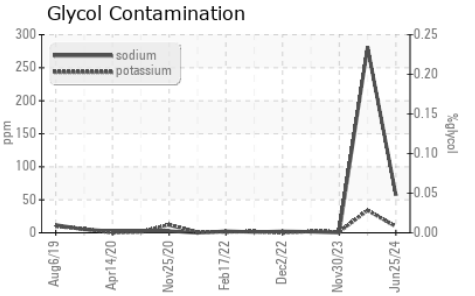
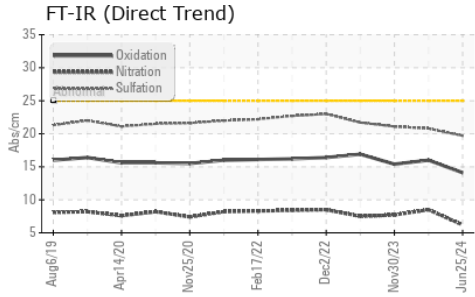
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		243	152	247
Barium	ppm	ASTM D5185m		0	0	3
Molybdenum	ppm	ASTM D5185m		235	221	267
Manganese	ppm	ASTM D5185m		0	1	<1
Magnesium	ppm	ASTM D5185m		761	801	774
Calcium	ppm	ASTM D5185m		1421	1642	1461
Phosphorus	ppm	ASTM D5185m		851	931	850
Zinc	ppm	ASTM D5185m		1111	1135	1075
Sulfur	ppm	ASTM D5185m		3126	3593	3795

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	7	16	8
Sodium	ppm	ASTM D5185m	>31	57	281	0
Potassium	ppm	ASTM D5185m	>20	9	34	2
Glycol	%	*ASTM D2982		NEG	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.2	8.5	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	20.8	21.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	16.0	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.8	9.9	9.1

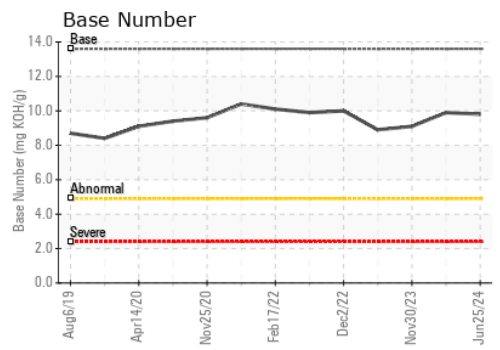
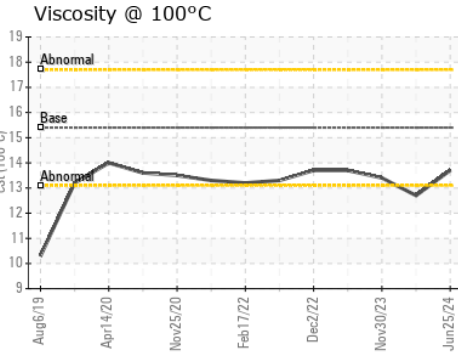
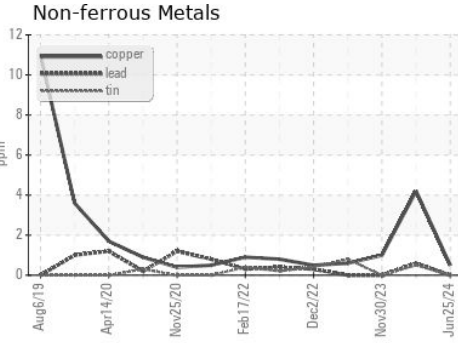
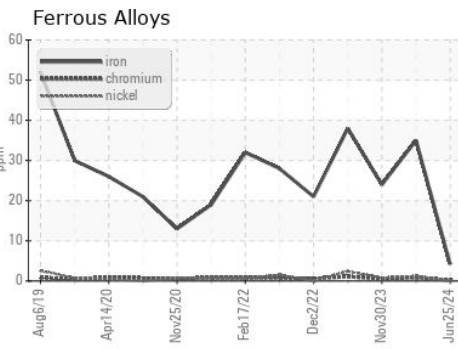
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	12.7	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0221389 **Received** : 26 Jun 2024
Lab Number : **06220970** **Tested** : 28 Jun 2024
Unique Number : 11099167 **Diagnosed** : 28 Jun 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: Glycol, TBN)

HERITAGE SITE DEVELOPMENT
 26 CATTLEMANS DR
 BERRYVILLE, VA
 US 20134
 Contact: SERVICE MANAGER
 dieselp44@yahoo.com
 T: (540)327-2857
 F:

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)