



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**JOHN DEERE 410E 1DW410EBAMF709486**

Component  
**Diesel Engine**

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

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0193169</b>	JR0178351	JR0161427
Sample Date		Client Info		<b>02 Jan 2024</b>	23 Aug 2023	11 May 2023
Machine Age	hrs	Client Info		<b>10661</b>	4031	3448
Oil Age	hrs	Client Info		<b>6630</b>	2031	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>10</b>	10	7
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	<1	2
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>10</b>	6	7
Lead	ppm	ASTM D5185m	>26	<b>5</b>	4	3
Copper	ppm	ASTM D5185m	>26	<b>5</b>	8	6
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	2	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

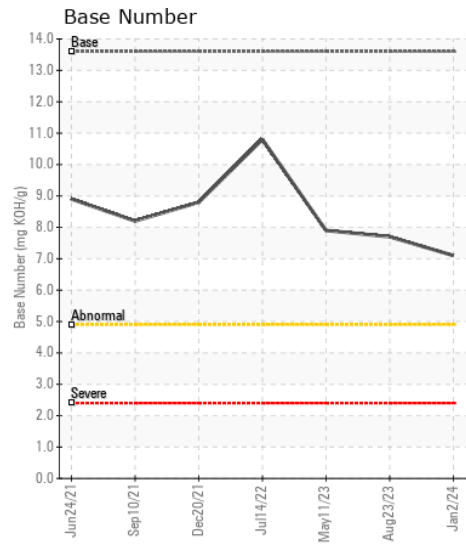
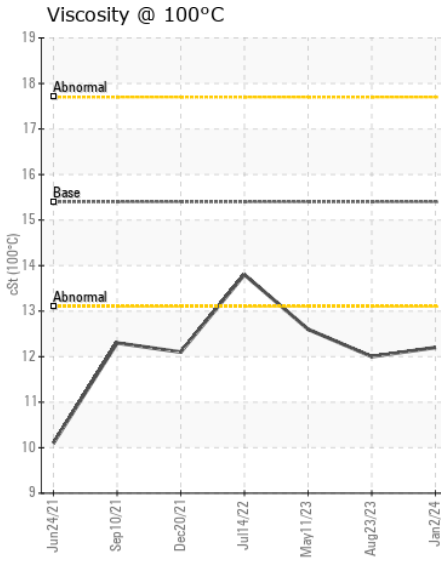
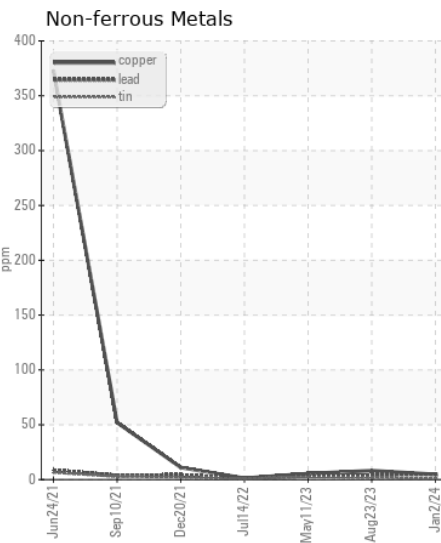
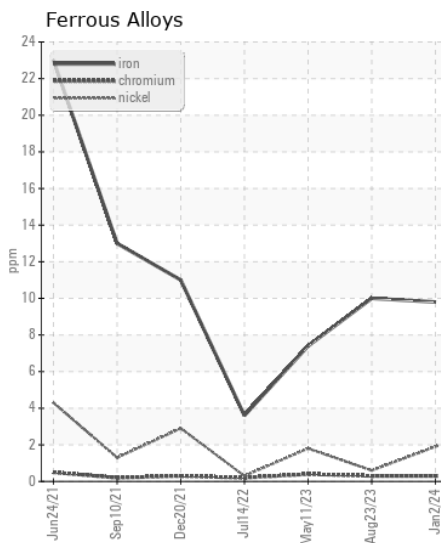
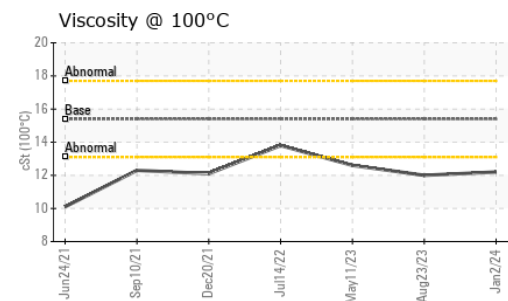
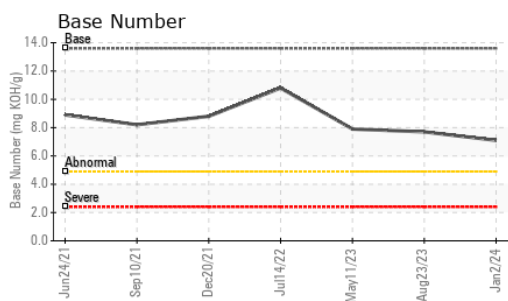
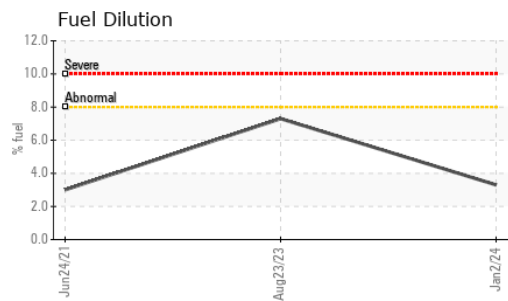
Fuel content negligible. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>12</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	3
Fuel	%	ASTM D3524	>8.0	<b>3.3</b>	7.3	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	8.9	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	22.9	22.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	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	<b>2</b>	5	3
Boron	ppm	ASTM D5185m		<b>161</b>	144	226
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>229</b>	238	205
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>841</b>	818	742
Calcium	ppm	ASTM D5185m		<b>1304</b>	1440	1369
Phosphorus	ppm	ASTM D5185m		<b>862</b>	782	902
Zinc	ppm	ASTM D5185m		<b>1077</b>	956	1112
Sulfur	ppm	ASTM D5185m		<b>2998</b>	3391	3635
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	16.9	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>7.1</b>	7.7	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.2</b>	▲ 12.0	12.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0193169 **Received** : 12 Jan 2024  
**Lab Number** : 06059102 **Diagnosed** : 29 Jan 2024  
**Unique Number** : 10830484 **Diagnostician** : Doug Bogart  
**Test Package** : CONST ( Additional Tests: FUELDILUTION, PercentFuel, 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)