



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 410E-II 1DW410EBTMF708927

Component
Diesel Engine

Fluid
Diesel Engine Oil (--- 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		JR0193133	JR0178317	JR0162428
Sample Date		Client Info		02 Jan 2024	18 Sep 2023	11 Apr 2023
Machine Age	hrs	Client Info		3539	3539	2968
Oil Age	hrs	Client Info		2533	3104	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	7	14	12
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	7	7	2
Lead	ppm	ASTM D5185m	>26	6	5	5
Copper	ppm	ASTM D5185m	>26	5	6	6
Tin	ppm	ASTM D5185m	>4	1	2	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

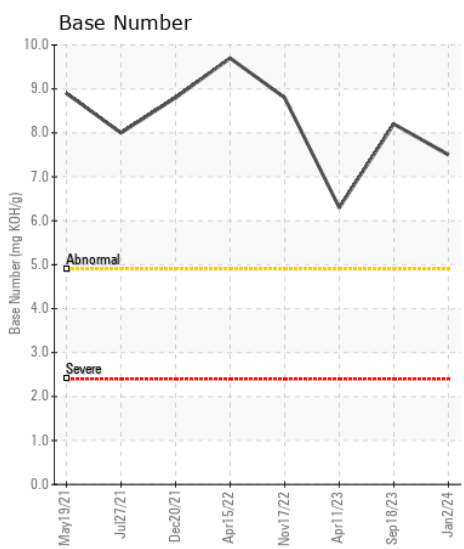
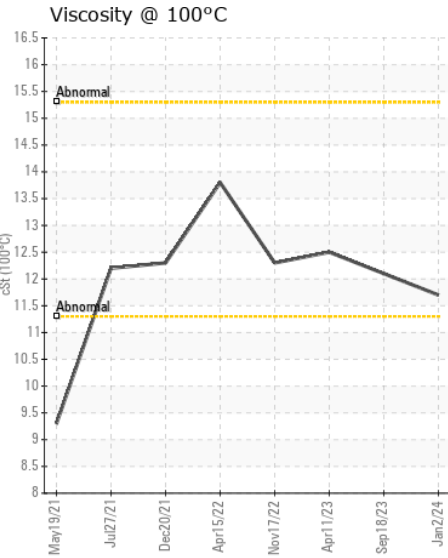
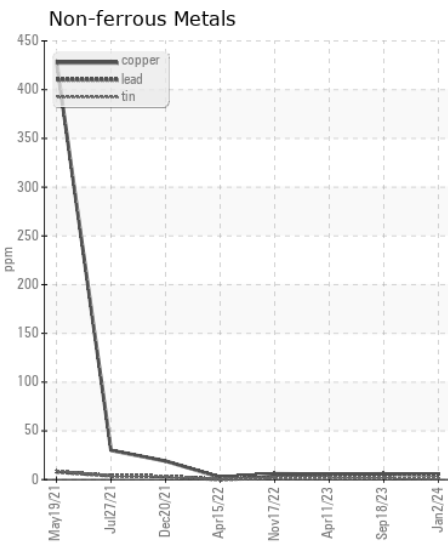
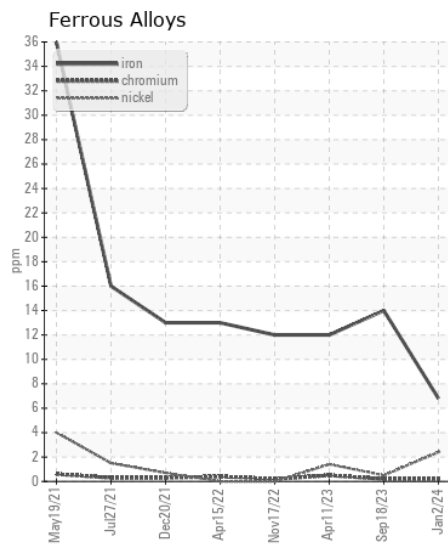
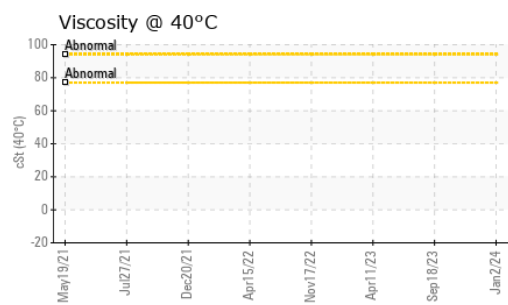
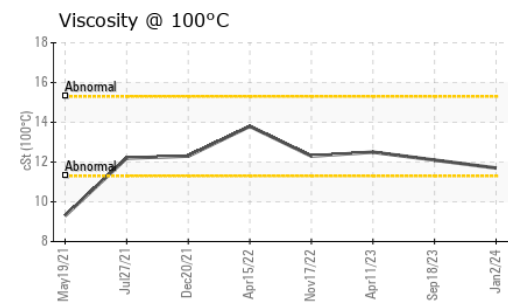
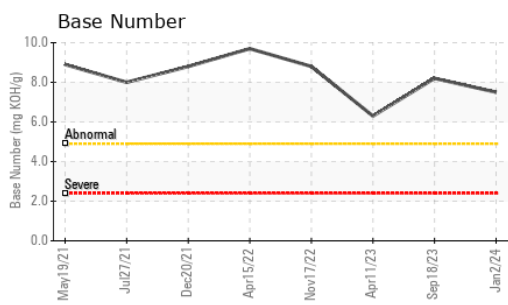
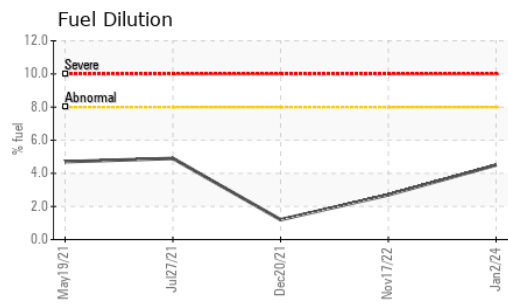
Fuel content negligible. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>22	7	9	6
Potassium	ppm	ASTM D5185m	>20	<1	2	2
Fuel	%	ASTM D3524	>8.0	4.5	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.2	10.0	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	25.9	21.3
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	2	2	4
Boron	ppm	ASTM D5185m		123	131	151
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		225	253	226
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		843	750	706
Calcium	ppm	ASTM D5185m		1309	1405	1386
Phosphorus	ppm	ASTM D5185m		800	800	798
Zinc	ppm	ASTM D5185m		1036	993	961
Sulfur	ppm	ASTM D5185m		3001	3252	2941
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	18.3	16.7
Base Number (BN)	mg KOH/g	ASTM D2896		7.5	8.2	6.3
Visc @ 100°C	cSt	ASTM D445		11.7	12.1	12.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0193133 **Received** : 12 Jan 2024
Lab Number : 06059098 **Diagnosed** : 29 Jan 2024
Unique Number : 10830480 **Diagnostician** : Doug Bogart
Test Package : CONST (Additional Tests: FUELDILUTION, KV40, PercentFuel, PQ, TBN)

CARLTON'S BACKHOE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269
 Contact: LEO

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)

T: (704)547-0211

F: