



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	MARGINAL



Area
Store 9 - Marietta [RO#151218]
Machine Id
JOHN DEERE 1050K SB 1T01050PJF333070
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0050002	LEC0035464	LEC0041509
Sample Date		Client Info		24 Jun 2024	04 Oct 2023	21 Jun 2023
Machine Age	hrs	Client Info		1029	758	488
Oil Age	hrs	Client Info		271	270	30
Filter Age	hrs	Client Info		271	270	30
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>37	4	10	11
Chromium	ppm	ASTM D5185m	>11	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	4	6	2
Lead	ppm	ASTM D5185m	>26	3	4	4
Copper	ppm	ASTM D5185m	>26	20	▲ 81	43
Tin	ppm	ASTM D5185m	>4	3	3	2
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

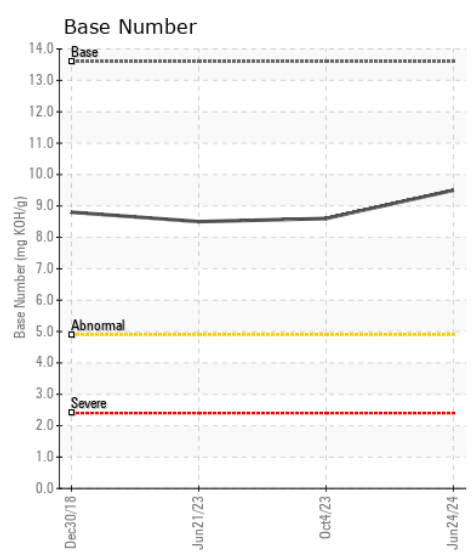
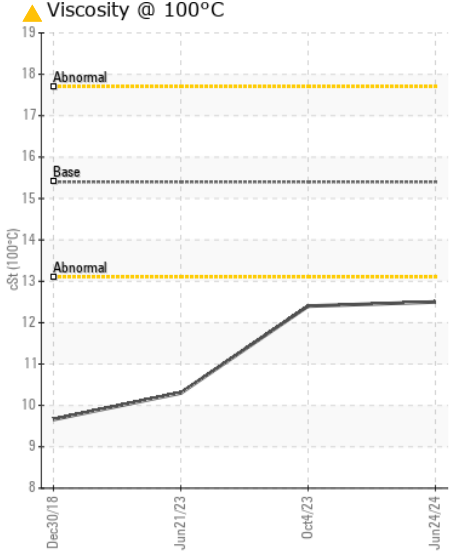
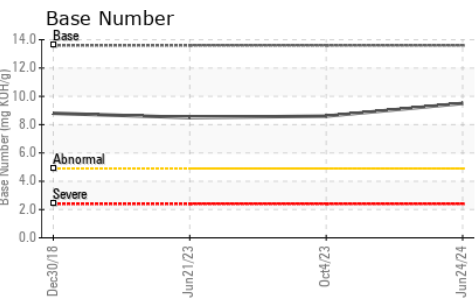
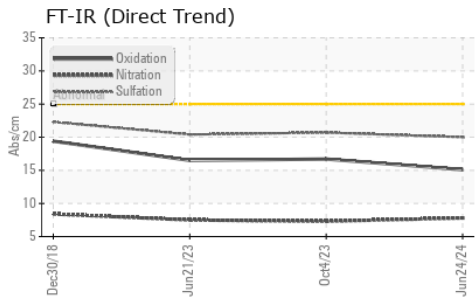
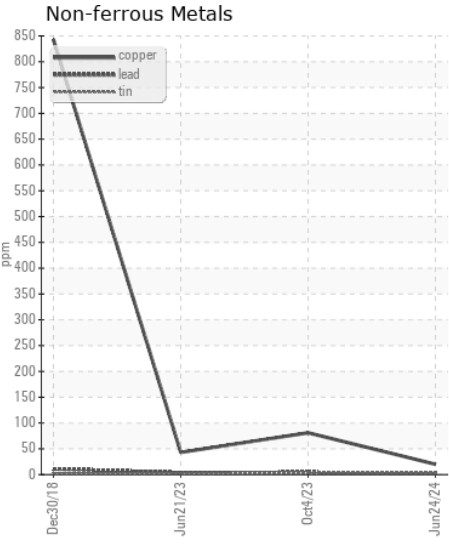
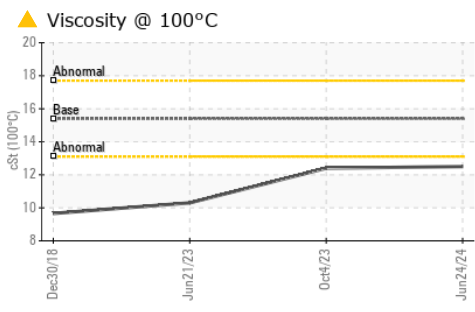
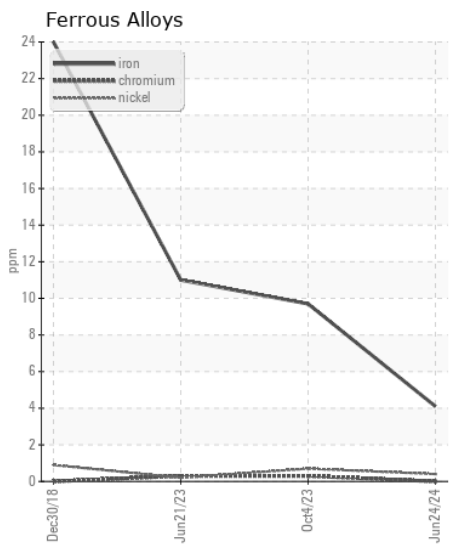
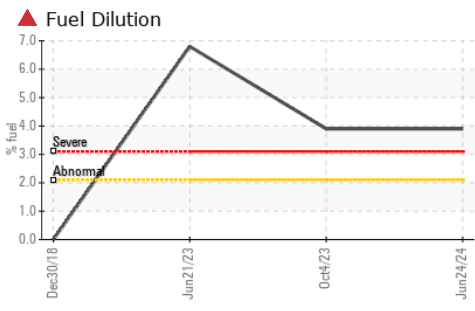
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>120	6	8	8
Potassium	ppm	ASTM D5185m	>20	2	2	3
Fuel	%	ASTM D3524	>2.1	▲ 3.9	▲ 3.9	▲ 6.8
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.8	7.3	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	20.7	20.4
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>31	2	4	7
Boron	ppm	ASTM D5185m		267	300	205
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		228	245	173
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		815	734	733
Calcium	ppm	ASTM D5185m		1363	1332	1469
Phosphorus	ppm	ASTM D5185m		908	860	864
Zinc	ppm	ASTM D5185m		1065	1040	1090
Sulfur	ppm	ASTM D5185m		3507	3262	3974
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	16.7	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.5	8.6	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.5	▲ 12.4	▲ 10.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0050002 **Received** : 05 Jul 2024
Lab Number : 06228261 **Tested** : 09 Jul 2024
Unique Number : 11111754 **Diagnosed** : 09 Jul 2024 - Wes Davis
Test Package : CONST (Additional Tests: 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) F: (740)373-5570