



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ATTENTION

Area
Store 5 - Cross Lanes

Machine Id
JOHN DEERE 332 T00332F123429

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (13 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0046538	LEC0035822	---
Sample Date		Client Info		23 Apr 2024	20 Jan 2023	---
Machine Age	hrs	Client Info		4192	3514	---
Oil Age	hrs	Client Info		196	500	---
Filter Age	hrs	Client Info		196	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				SEVERE	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	34	31	---
Chromium	ppm	ASTM D5185m	>11	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	0	1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	<1	---
Aluminum	ppm	ASTM D5185m	>31	6	5	---
Lead	ppm	ASTM D5185m	>26	<1	<1	---
Copper	ppm	ASTM D5185m	>26	5	1	---
Tin	ppm	ASTM D5185m	>4	1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

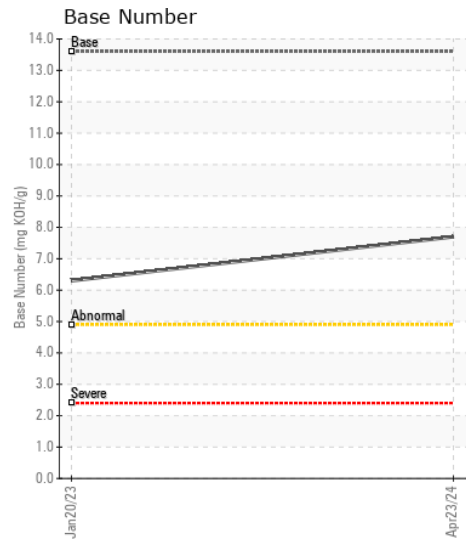
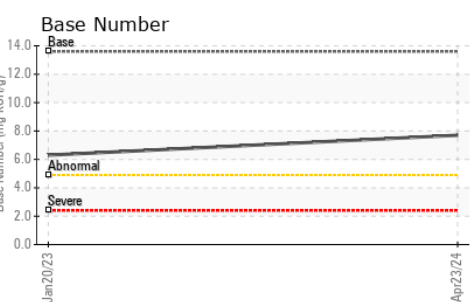
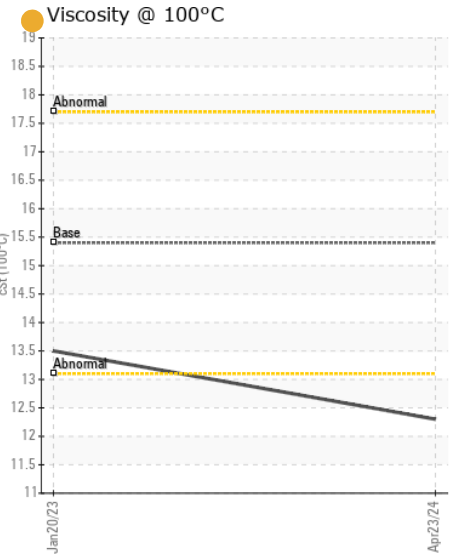
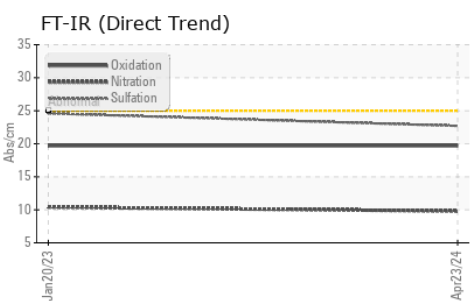
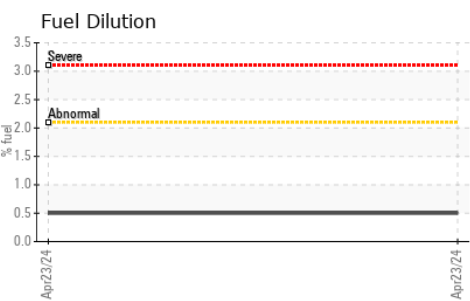
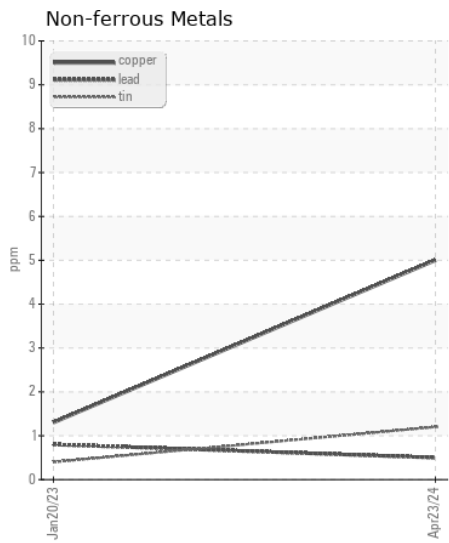
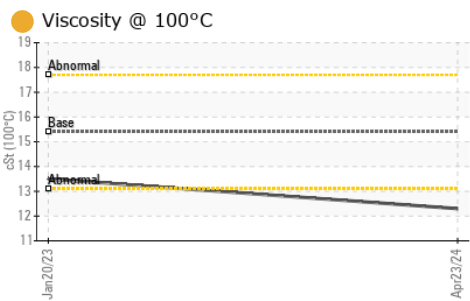
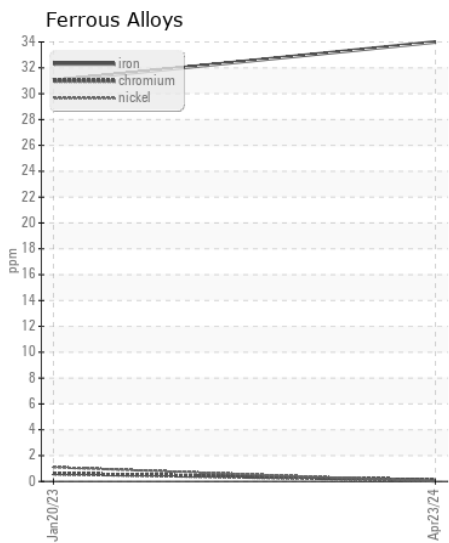
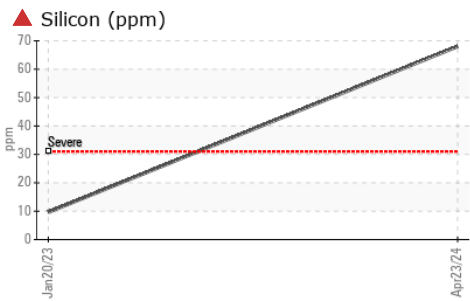
Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>120	▲ 68	10	---
Potassium	ppm	ASTM D5185m	>20	7	17	---
Fuel	%	ASTM D3524	>2.1	0.5	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	9.8	10.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	24.6	---
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	---

FLUID CONDITION

The oil viscosity is lower than normal. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>31	14	18	---
Boron	ppm	ASTM D5185m		129	106	---
Barium	ppm	ASTM D5185m		7	0	---
Molybdenum	ppm	ASTM D5185m		148	5	---
Manganese	ppm	ASTM D5185m		2	<1	---
Magnesium	ppm	ASTM D5185m		681	17	---
Calcium	ppm	ASTM D5185m		1616	2092	---
Phosphorus	ppm	ASTM D5185m		1045	925	---
Zinc	ppm	ASTM D5185m		1225	1112	---
Sulfur	ppm	ASTM D5185m		3265	4061	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.7	19.7	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.7	6.3	---
Visc @ 100°C	cSt	ASTM D445	15.4	● 12.3	13.5	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0046538 **Received** : 25 Apr 2024
Lab Number : 06160119 **Tested** : 29 Apr 2024
Unique Number : 10995542 **Diagnosed** : 29 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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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)