

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Area

[W48792]

Machine Id

JOHN DEERE 850L 1T0850LXEPF453029

Component

Diesel Engine

Fluid

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

DIAGNOSIS
▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

The copper level is abnormal. Elemental level of copper (Cu) probably due to leaching of copper from copper components (i.e. cooling core) by the oil additives. All other metal levels are typical for a new component breaking in.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		JR0180724	---	---
Sample Date	Client Info		21 Dec 2023	---	---
Machine Age	hrs	Client Info	442	---	---
Oil Age	hrs	Client Info	442	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>0.21	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	102	---
Chromium	ppm	ASTM D5185m	>11	4	---
Nickel	ppm	ASTM D5185m	>5	18	---
Titanium	ppm	ASTM D5185m		<1	---
Silver	ppm	ASTM D5185m	>3	0	---
Aluminum	ppm	ASTM D5185m	>31	8	---
Lead	ppm	ASTM D5185m	>26	2	---
Copper	ppm	ASTM D5185m	>26	▲ 534	---
Tin	ppm	ASTM D5185m	>4	3	---
Vanadium	ppm	ASTM D5185m		<1	---
Cadmium	ppm	ASTM D5185m		<1	---

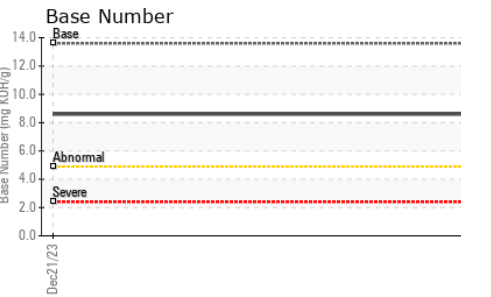
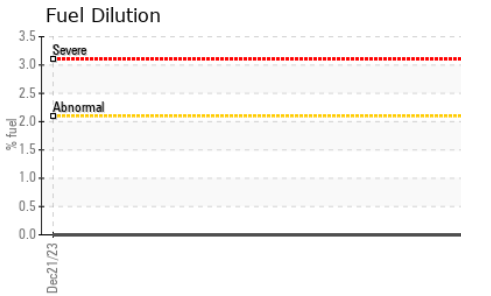
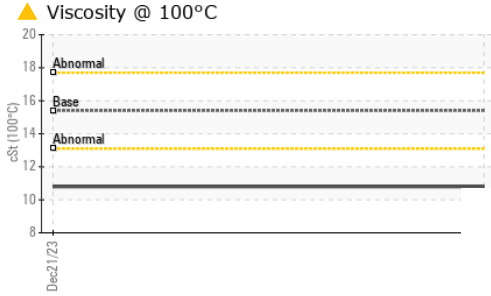
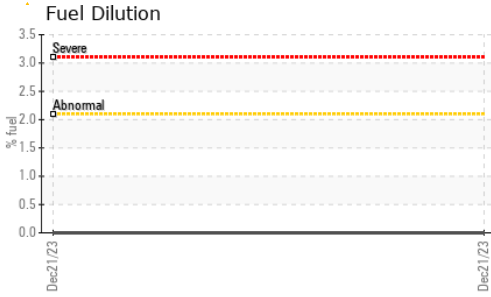
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		253	---
Barium	ppm	ASTM D5185m		8	---
Molybdenum	ppm	ASTM D5185m		292	---
Manganese	ppm	ASTM D5185m		4	---
Magnesium	ppm	ASTM D5185m		893	---
Calcium	ppm	ASTM D5185m		1720	---
Phosphorus	ppm	ASTM D5185m		1045	---
Zinc	ppm	ASTM D5185m		1242	---
Sulfur	ppm	ASTM D5185m		3821	---

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	21	---
Sodium	ppm	ASTM D5185m	>31	6	---
Potassium	ppm	ASTM D5185m	>20	11	---
Fuel	%	ASTM D3524	>2.1	0.0	---

INFRA-RED	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	8.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	---

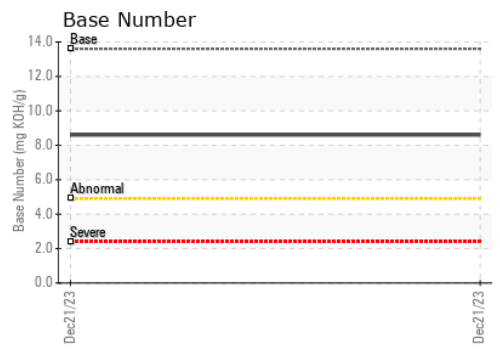
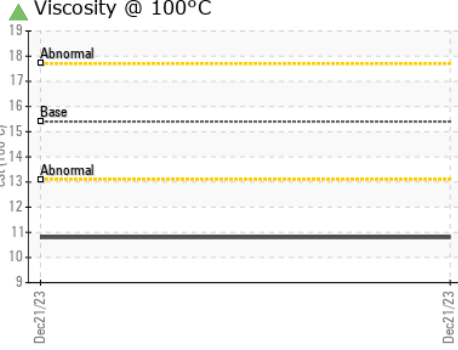
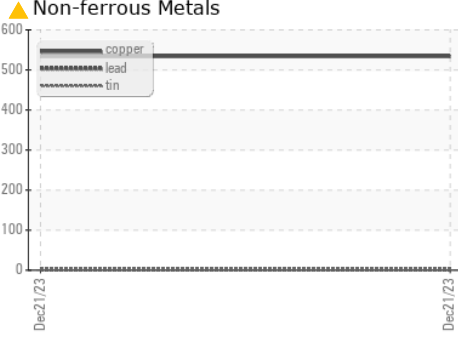
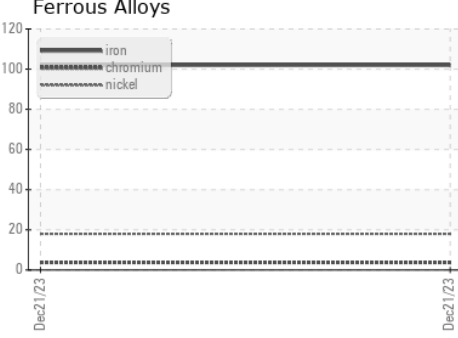
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4 ▲ 10.8	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0180724 **Recieved** : 12 Jan 2024
Lab Number : 06059143 **Diagnosed** : 16 Jan 2024
Unique Number : 10830525 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

JRE - ASHLAND
 11047 LEADBETTER RD
 ASHLAND, VA
 US 23005
 Contact: DAVID ZIEG
 dzieg@jamesriverequipment.com
 T: (804)798-6001
 F: (804)798-0292

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)