



OIL ANALYSIS REPORT

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

Area

Store 2 - Beaver

Machine Id

JOHN DEERE 859M 1T0859MXCPL441159

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (9 GAL)

**RECOMMENDATION**

The oil 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0046255	---	---
Sample Date		Client Info		05 Feb 2024	---	---
Machine Age	hrs	Client Info		395	---	---
Oil Age	hrs	Client Info		395	---	---
Filter Age	hrs	Client Info		395	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				ABNORMAL	---	---

**WEAR**

Exhaust valve wear is indicated. All other metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	66	---	---
Chromium	ppm	ASTM D5185m	>11	2	---	---
Nickel	ppm	ASTM D5185m	>5	▲ 19	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>31	7	---	---
Lead	ppm	ASTM D5185m	>26	2	---	---
Copper	ppm	ASTM D5185m	>26	11	---	---
Tin	ppm	ASTM D5185m	>4	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

**CONTAMINATION**

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

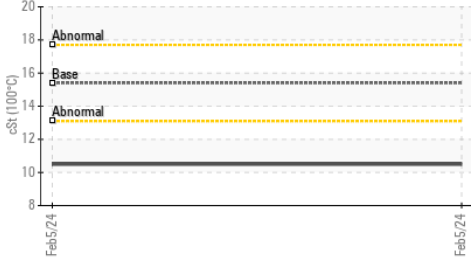
Silicon	ppm	ASTM D5185m	>120	11	---	---
Potassium	ppm	ASTM D5185m	>20	24	---	---
Fuel	%	ASTM D3524	>2.1	0.2	---	---
Water		WC Method	>0.21	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	---	---
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	---	---

**FLUID CONDITION**

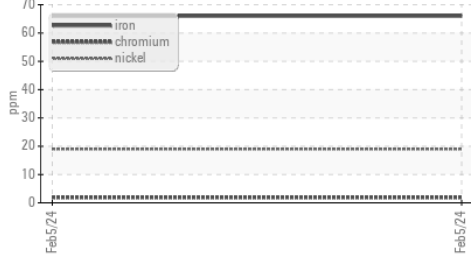
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>31	8	---	---
Boron	ppm	ASTM D5185m		209	---	---
Barium	ppm	ASTM D5185m		3	---	---
Molybdenum	ppm	ASTM D5185m		250	---	---
Manganese	ppm	ASTM D5185m		3	---	---
Magnesium	ppm	ASTM D5185m		825	---	---
Calcium	ppm	ASTM D5185m		1624	---	---
Phosphorus	ppm	ASTM D5185m		983	---	---
Zinc	ppm	ASTM D5185m		1158	---	---
Sulfur	ppm	ASTM D5185m		3258	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.9	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 10.5	---	---

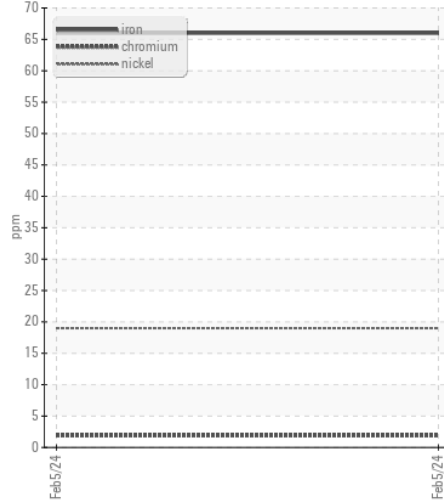
▲ Viscosity @ 100°C



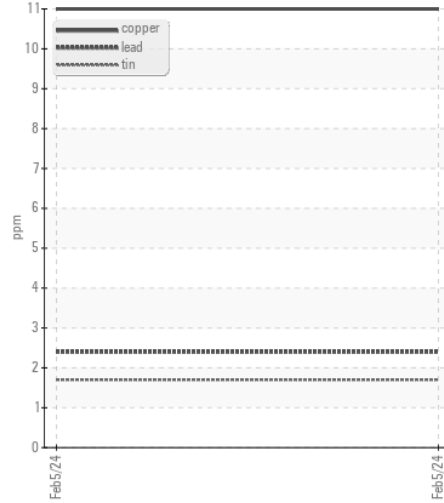
▲ Ferrous Alloys



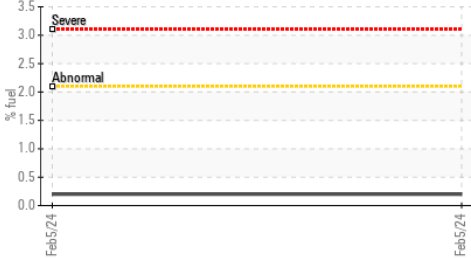
▲ Ferrous Alloys



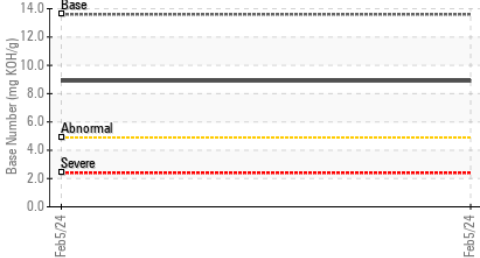
Non-ferrous Metals



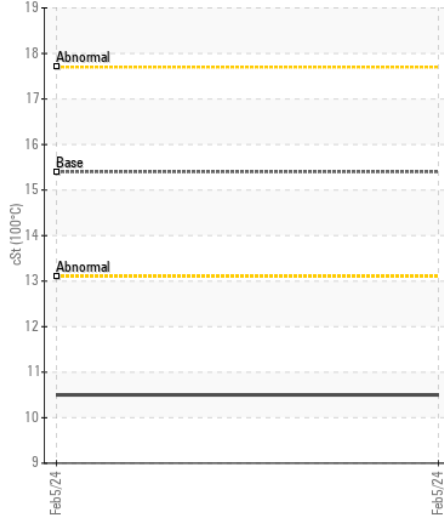
Fuel Dilution



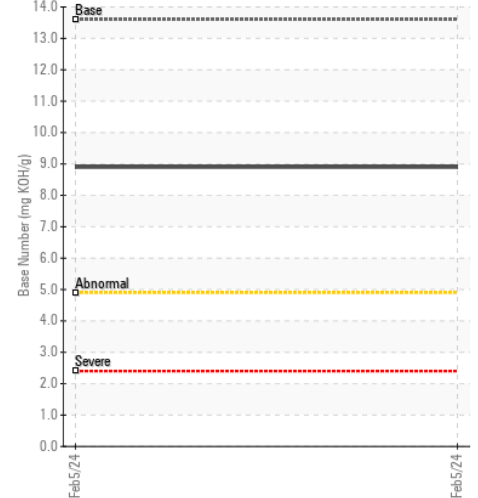
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0046255 **Received** : 23 Feb 2024  
**Lab Number** : 06099034 **Tested** : 27 Feb 2024  
**Unique Number** : 10897264 **Diagnosed** : 27 Feb 2024 - Sean Felton  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**LESLIE EQUIPMENT COMPANY**  
 105 TENNIS CENTER DR.  
 MARIETTA, OH  
 US 45750-9765  
 Contact: LEANNE KENDALL  
 KendalLeanne@lec1.com

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)

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