



# OIL ANALYSIS REPORT

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



Area  
**Store 4 - Fairmont**  
Machine Id  
**JOHN DEERE 950K 1T0950KPCJF334368**  
Component  
**Diesel Engine**  
Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (7 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		<b>LEC0039582</b>	LEC0016597	LECP193391
Sample Date		Client Info		<b>17 Feb 2023</b>	20 Oct 2020	18 Jan 2019
Machine Age	hrs	Client Info		<b>1496</b>	905	432
Oil Age	hrs	Client Info		<b>591</b>	473	432
Filter Age	hrs	Client Info		<b>591</b>	473	432
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR

The copper level is abnormal. Cylinder, crank, or cam shaft wear is indicated. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Iron	ppm	ASTM D5185m	>51	<b>▲ 163</b>	▲ 168	65
Chromium	ppm	ASTM D5185m	>11	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	3	4
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>31	<b>8</b>	6	8
Lead	ppm	ASTM D5185m	>26	<b>1</b>	2	1
Copper	ppm	ASTM D5185m	>26	<b>▲ 101</b>	12	20
Tin	ppm	ASTM D5185m	>4	<b>2</b>	2	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

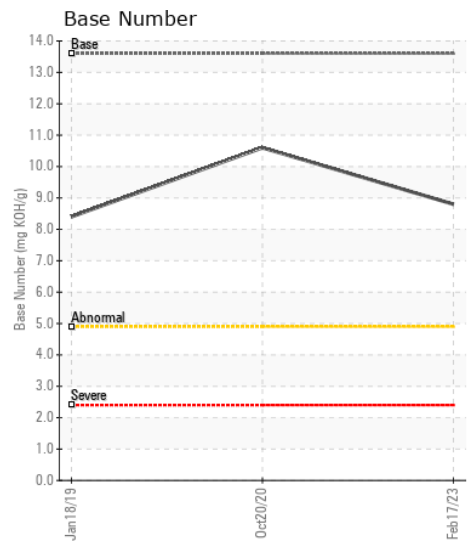
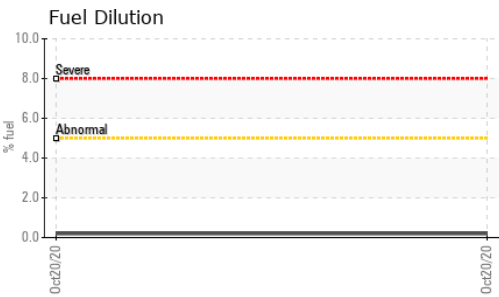
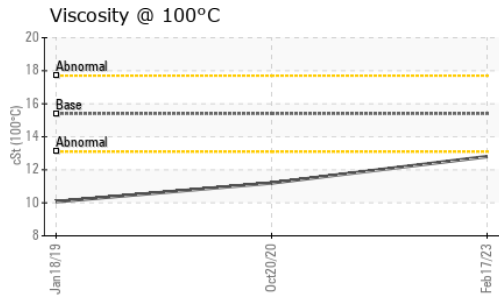
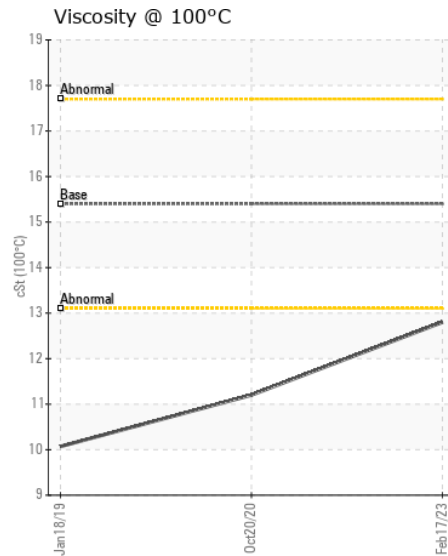
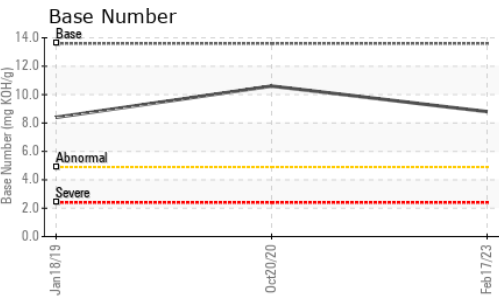
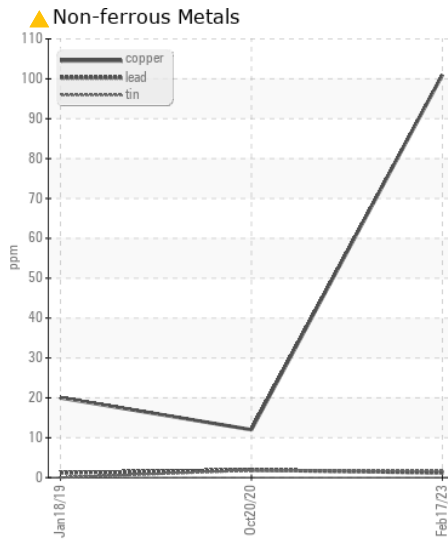
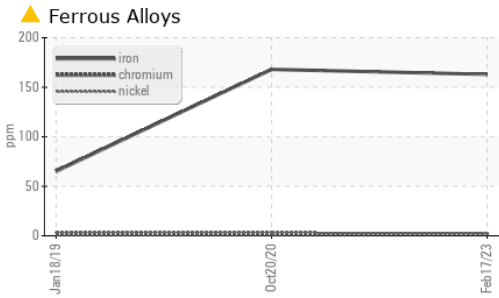
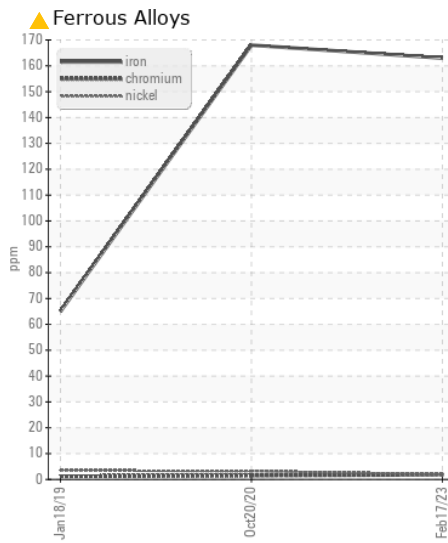
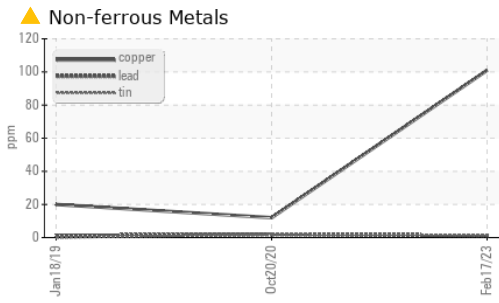
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>120	<b>10</b>	9	10
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	31	20
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	0.2	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	0.0	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	8	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	22.1	21.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	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	<b>23</b>	▲ 185	11
Boron	ppm	ASTM D5185m		<b>155</b>	181	174
Barium	ppm	ASTM D5185m		<b>0</b>	0	3
Molybdenum	ppm	ASTM D5185m		<b>250</b>	182	226
Manganese	ppm	ASTM D5185m		<b>2</b>	2	2
Magnesium	ppm	ASTM D5185m		<b>759</b>	620	834
Calcium	ppm	ASTM D5185m		<b>1544</b>	2257	1505
Phosphorus	ppm	ASTM D5185m		<b>781</b>	969	819
Zinc	ppm	ASTM D5185m		<b>963</b>	1191	996
Sulfur	ppm	ASTM D5185m		<b>2969</b>	2896	2431
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.3</b>	15.3	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.8</b>	10.6	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.8</b>	▲ 11.2	10.07



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0039582 **Received** : 21 Feb 2023  
**Lab Number** : 05773378 **Diagnosed** : 22 Feb 2023  
**Unique Number** : 10347995 **Diagnostician** : Jonathan Hester  
**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  
 T:  
 F: (740)373-5570

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)