



# OIL ANALYSIS REPORT

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

Area

[W7603]

Machine Id

JOHN DEERE 190GW 1FF190GWPFE051039

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (6 GAL)

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: W7603 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0141053</b>	JR0112953	JR0099223
Sample Date		Client Info		<b>28 Aug 2023</b>	06 Jan 2022	18 Aug 2021
Machine Age	hrs	Client Info		<b>5969</b>	4067	3665
Oil Age	hrs	Client Info		<b>1902</b>	3000	0
Filter Age	hrs	Client Info		<b>1902</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>9</b>	12	24
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	6	9
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	1	2
Copper	ppm	ASTM D5185m	>26	<b>2</b>	1	4
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

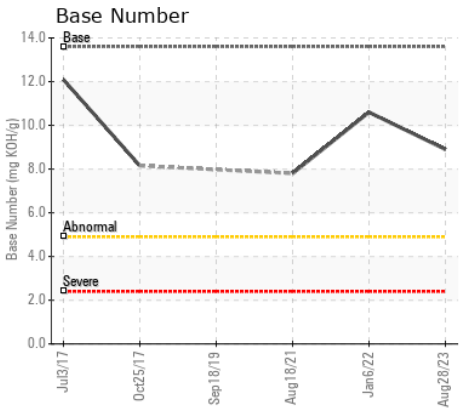
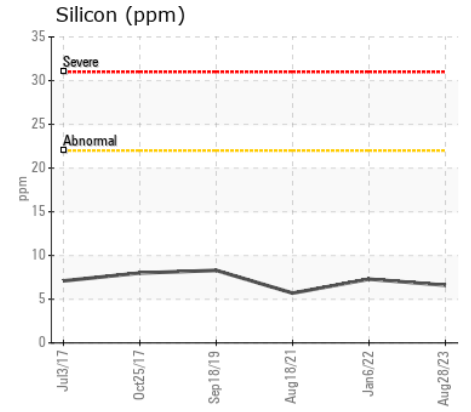
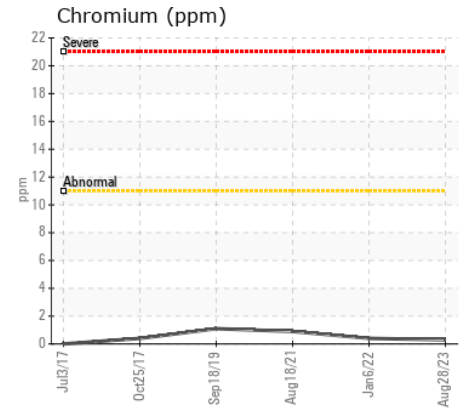
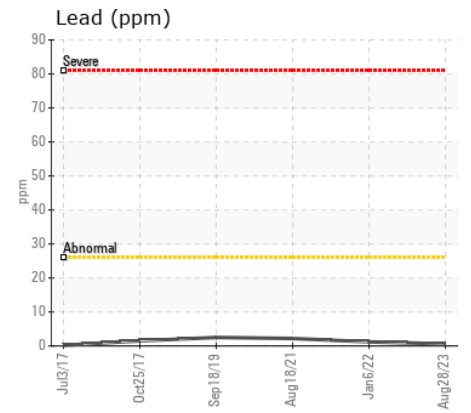
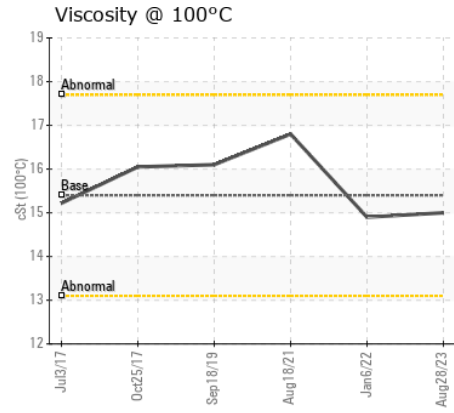
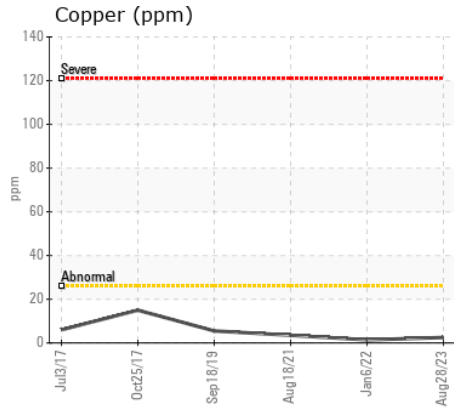
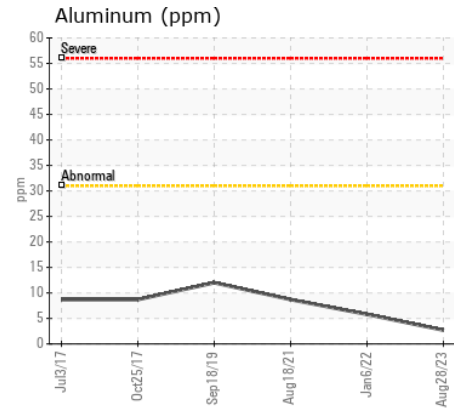
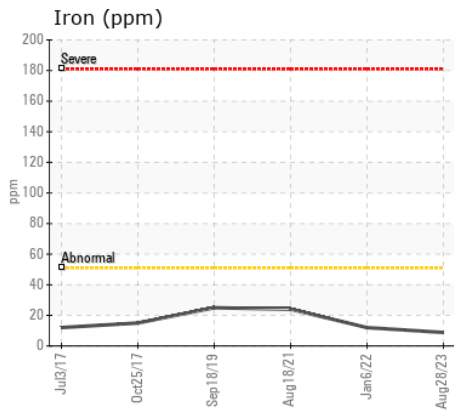
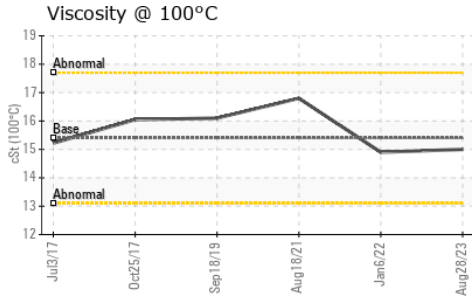
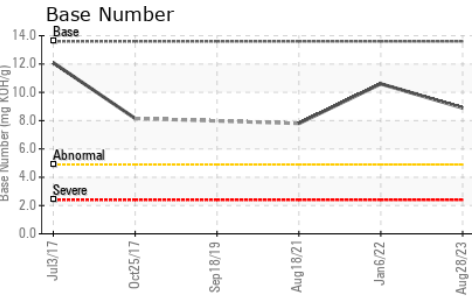
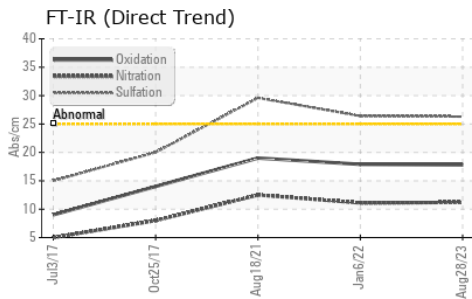
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>7</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	2
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>2.5</b>	2.5	▲ 3.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.2</b>	11.1	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.3</b>	26.4	29.6
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 suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>1</b>	0	1
Boron	ppm	ASTM D5185m		<b>219</b>	174	129
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>247</b>	256	232
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>856</b>	844	826
Calcium	ppm	ASTM D5185m		<b>1464</b>	1529	1340
Phosphorus	ppm	ASTM D5185m		<b>886</b>	924	847
Zinc	ppm	ASTM D5185m		<b>1103</b>	1020	1068
Sulfur	ppm	ASTM D5185m		<b>3536</b>	2646	2413
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.8</b>	17.9	19
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.9</b>	10.6	7.8
Visc @ 100°C	cSt	ASTM D445	15.4	<b>15.0</b>	14.9	16.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0141053 **Received** : 31 Aug 2023  
**Lab Number** : 05939588 **Tested** : 01 Sep 2023  
**Unique Number** : 10630200 **Diagnosed** : 01 Sep 2023 - Don Baldrige  
**Test Package** : MOBCE ( Additional Tests: TBN )

**JRE - GARNER**  
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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)