



# OIL ANALYSIS REPORT

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

Area  
**Store 9 - Marietta**

Machine Id  
**JOHN DEERE 160G 31-008 (S/N 1FF160GXPKF057333)**

Component  
**Diesel Engine**

Fluid  
**SHELL ROTELLA T 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LEC0032056</b>	LEC0044310	LEC0016497
Sample Date		Client Info		<b>26 Jun 2024</b>	28 Sep 2023	23 Nov 2022
Machine Age	hrs	Client Info		<b>3341</b>	3122	2750
Oil Age	hrs	Client Info		<b>0</b>	1122	0
Filter Age	hrs	Client Info		<b>0</b>	1122	0
Oil Changed		Client Info		<b>N/A</b>	Changed	N/A
Filter Changed		Client Info		<b>N/A</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>29</b>	▲ 63	8
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	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>	3	2
Lead	ppm	ASTM D5185m	>26	<b>10</b>	4	3
Copper	ppm	ASTM D5185m	>26	<b>7</b>	14	<1
Tin	ppm	ASTM D5185m	>4	<b>0</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

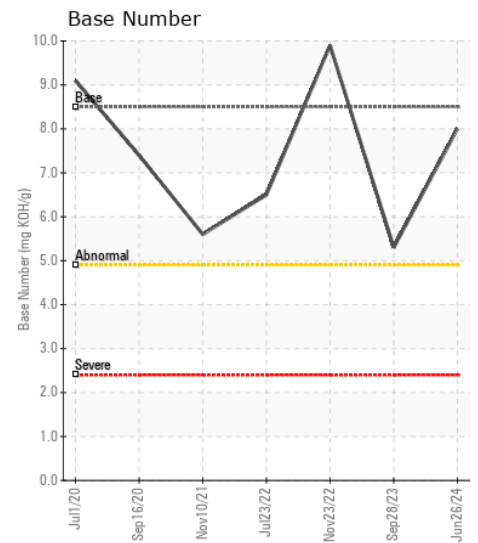
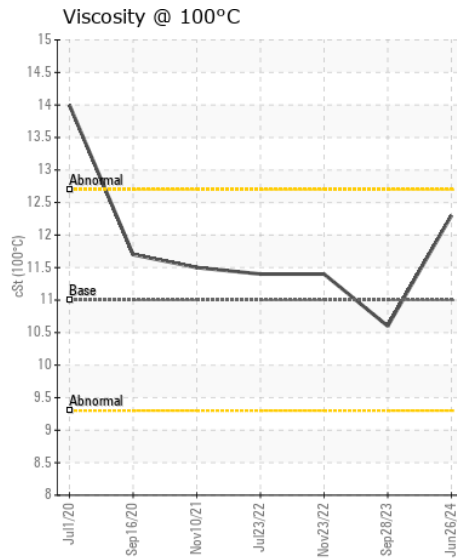
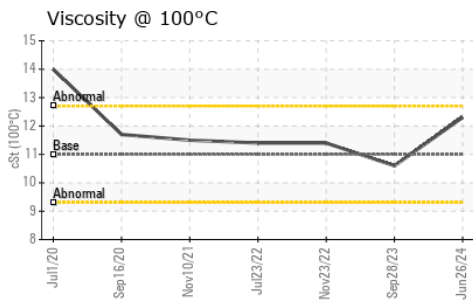
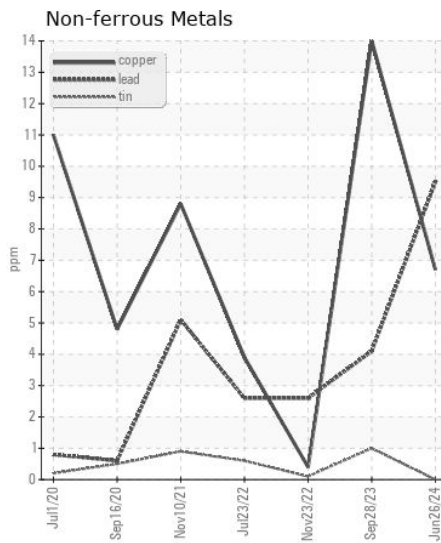
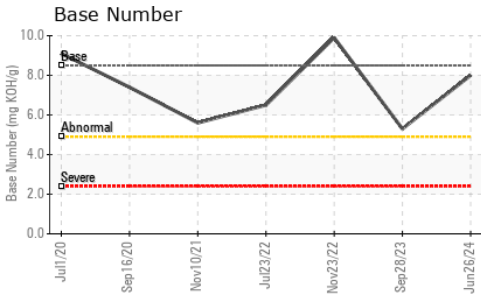
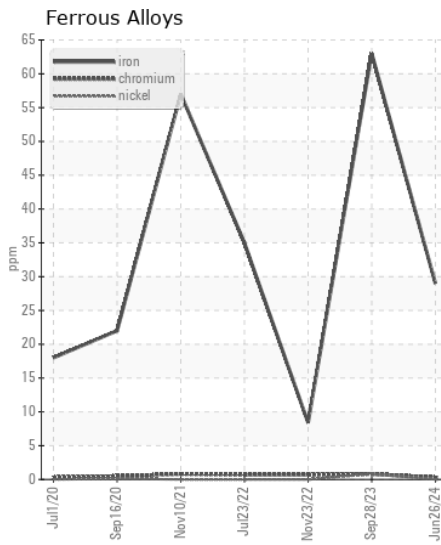
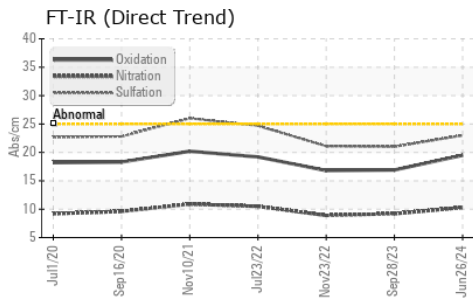
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>120	<b>9</b>	8	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	11	<1
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>0.3</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.3</b>	9.2	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.0</b>	21.0	21.1
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>4</b>	8	1
Boron	ppm	ASTM D5185m	269	<b>147</b>	204	4
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185m	0	<b>205</b>	17	60
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185m	20	<b>683</b>	96	886
Calcium	ppm	ASTM D5185m	1521	<b>1592</b>	2527	1093
Phosphorus	ppm	ASTM D5185m	948	<b>861</b>	1149	960
Zinc	ppm	ASTM D5185m	893	<b>1030</b>	1444	1170
Sulfur	ppm	ASTM D5185m		<b>3300</b>	4042	3377
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.5</b>	16.9	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.0</b>	5.3	9.9
Visc @ 100°C	cSt	ASTM D445	11.0	<b>12.3</b>	10.6	11.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LEC0032056 **Received** : 05 Jul 2024  
**Lab Number** : 06229415 **Tested** : 09 Jul 2024  
**Unique Number** : 11112908 **Diagnosed** : 09 Jul 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: TBN )

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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