



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta [124061]

Machine Id
1DW260ETKKF694187

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (9 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		LEC0027207	LEC0006187	---
Sample Date		Client Info		04 Jan 2022	16 Sep 2019	---
Machine Age	hrs	Client Info		1298	611	---
Oil Age	hrs	Client Info		687	611	---
Filter Age	hrs	Client Info		687	611	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

The copper level has decreased, but is still abnormal. Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>51	▲ 116	51	---
Chromium	ppm	ASTM D5185m	>11	2	<1	---
Nickel	ppm	ASTM D5185m	>5	3	4	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		<1	0	---
Aluminum	ppm	ASTM D5185m	>31	8	8	---
Lead	ppm	ASTM D5185m	>26	1	<1	---
Copper	ppm	ASTM D5185m	>26	▲ 138	▲ 297	---
Tin	ppm	ASTM D5185m	>4	1	3	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

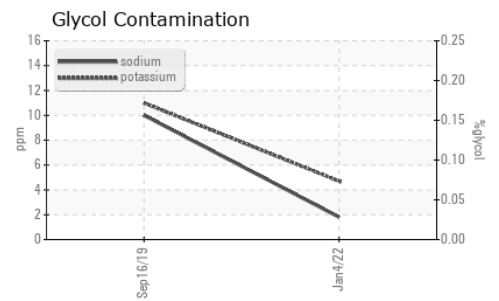
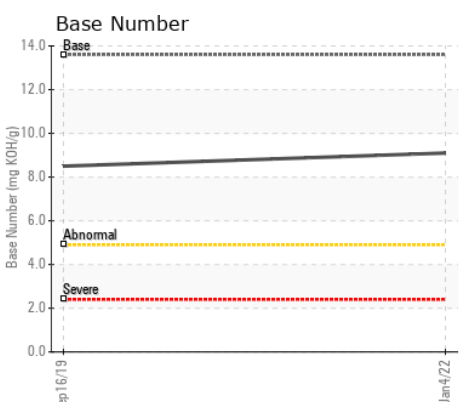
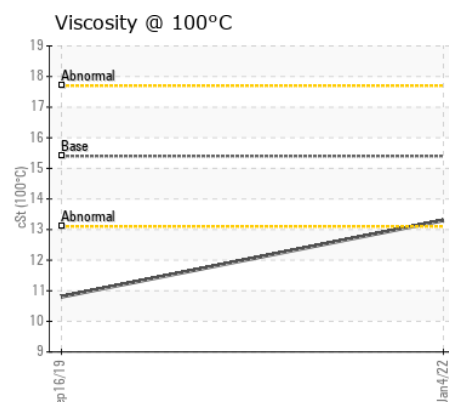
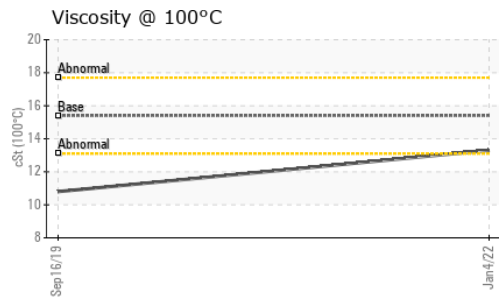
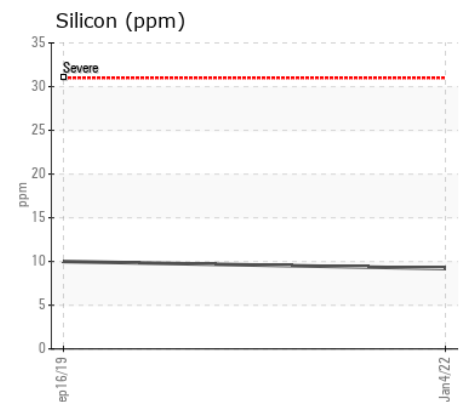
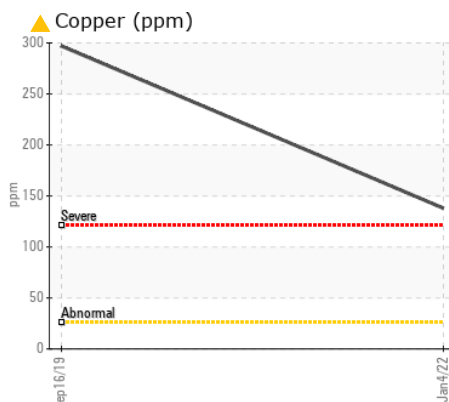
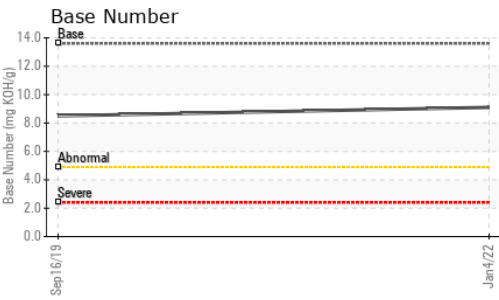
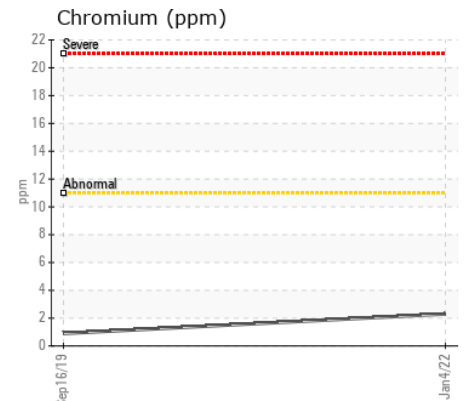
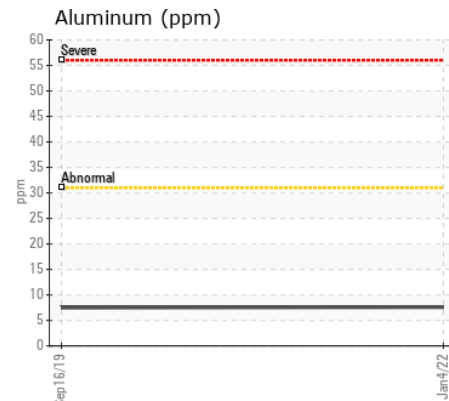
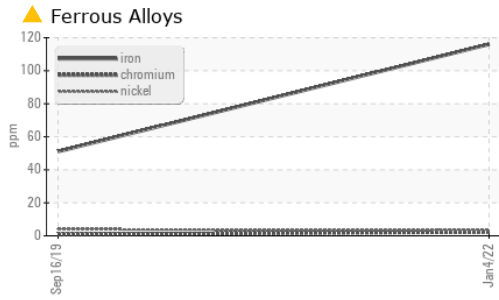
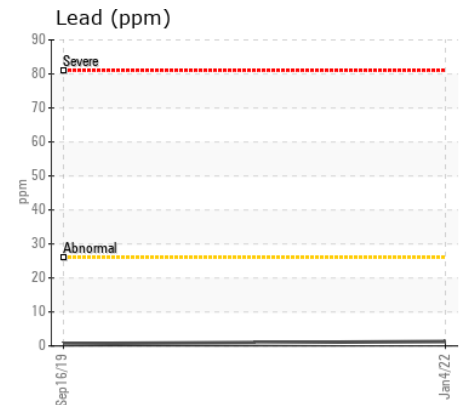
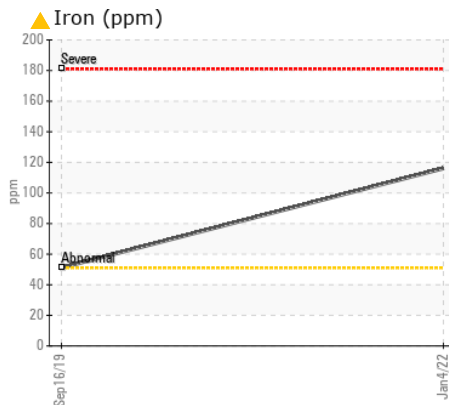
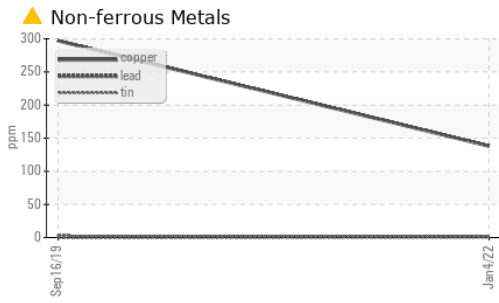
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>120	9	10	---
Potassium	ppm	ASTM D5185m	>20	5	11	---
Fuel		WC Method	>2.1	<1.0	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol	%	*ASTM D2982		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	9	8.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	22.2	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.21	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	2	10	---
Boron	ppm	ASTM D5185m		196	167	---
Barium	ppm	ASTM D5185m		<1	2	---
Molybdenum	ppm	ASTM D5185m		282	251	---
Manganese	ppm	ASTM D5185m		2	1	---
Magnesium	ppm	ASTM D5185m		907	821	---
Calcium	ppm	ASTM D5185m		1553	1508	---
Phosphorus	ppm	ASTM D5185m		931	846	---
Zinc	ppm	ASTM D5185m		1060	980	---
Sulfur	ppm	ASTM D5185m		2691	2175	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	17.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.1	8.5	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	10.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0027207 **Received** : 07 Jan 2022
Lab Number : 05438764 **Diagnosed** : 10 Jan 2022
Unique Number : 9802957 **Diagnostician** : Don Baldrige
Test Package : MOBCE (Additional Tests: Glycol, TBN)

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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)