



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area **Store 9 - Marietta**

Machine Id **JOHN DEERE MILL MOTOR**

Component **Diesel Engine**

Fluid **JOHN DEERE ENGINE OIL PLUS 50 II 10W30 (9 GAL)**

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0049483	LEC0044008	LEC0046975
Sample Date		Client Info		29 Mar 2024	16 Feb 2024	26 Jan 2024
Machine Age	hrs	Client Info		274	47	5833
Oil Age	hrs	Client Info		228	47	316
Filter Age	hrs	Client Info		228	47	316
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	7	9	18
Chromium	ppm	ASTM D5185m	>11	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	2	59
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	6	5	16
Lead	ppm	ASTM D5185m	>26	1	2	7
Copper	ppm	ASTM D5185m	>26	2	6	1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

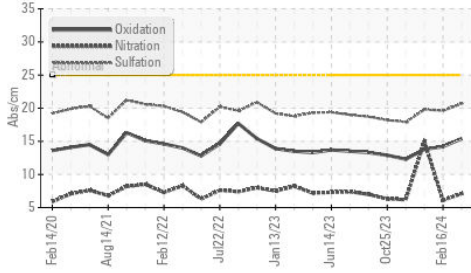
Silicon	ppm	ASTM D5185m	>120	10	11	11
Potassium	ppm	ASTM D5185m	>20	4	8	▲ 479
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.1	6.1	15.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	19.6	19.8
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG	NEG

FLUID CONDITION

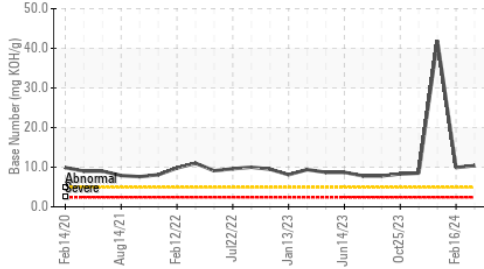
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	14	55	▲ 4684
Boron	ppm	ASTM D5185m		309	306	31
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		249	240	257
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		820	766	314
Calcium	ppm	ASTM D5185m		1458	1213	1470
Phosphorus	ppm	ASTM D5185m		955	880	889
Zinc	ppm	ASTM D5185m		1106	1018	1048
Sulfur	ppm	ASTM D5185m		3680	3087	3360
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	14.2	13.8
Base Number (BN)	mg KOH/g	ASTM D2896		10.4	9.9	41.9
Visc @ 100°C	cSt	ASTM D445		10.4	10.2	▲ 20.1

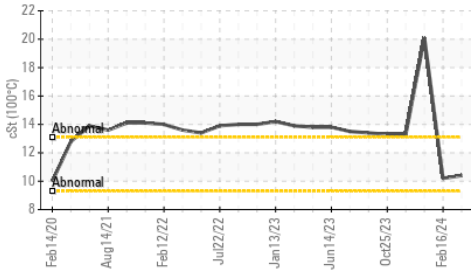
FT-IR (Direct Trend)



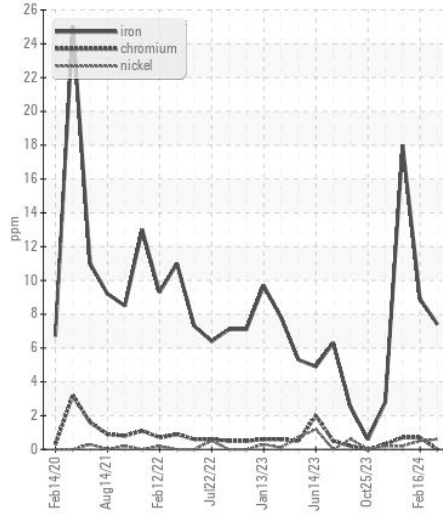
Base Number



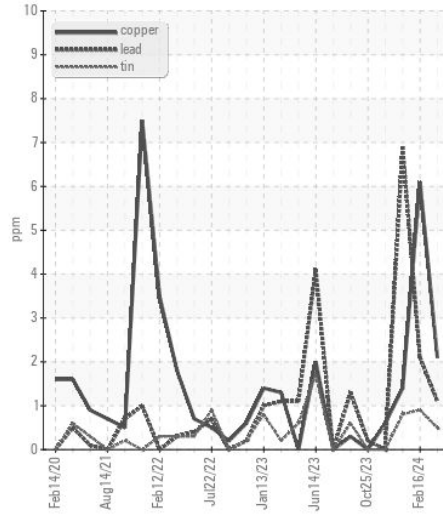
Viscosity @ 100°C



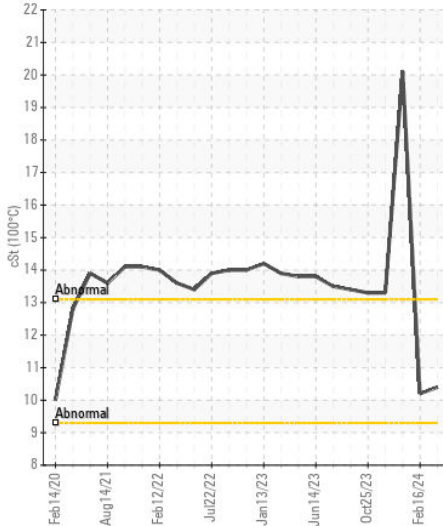
Ferrous Alloys



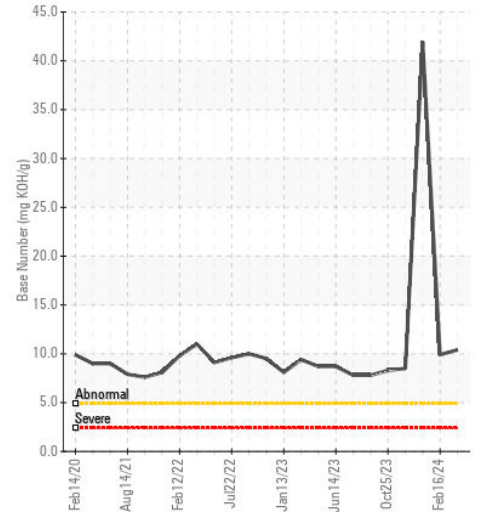
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049483 **Received** : 10 Apr 2024
Lab Number : 06145201 **Tested** : 11 Apr 2024
Unique Number : 10970009 **Diagnosed** : 13 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

LAROCHE TREE SERVICE
 7 COMMERCE PKWY
 BELLAIRE, OH
 US 43906
 Contact: GLEN VARGO
 glen.vargo@larochetree.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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