CONST

LESLIE EQUIPMENT CO.

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
Store 9 - Marietta
Machine Id
JOHN DEERE 1104
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

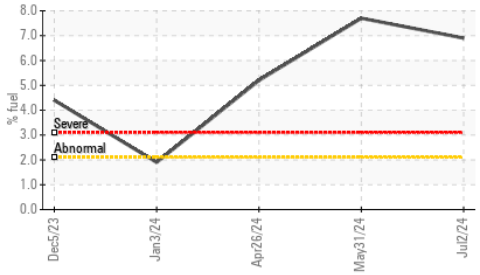
There is a high amount of fuel present in the oil.

FLUID CONDITION

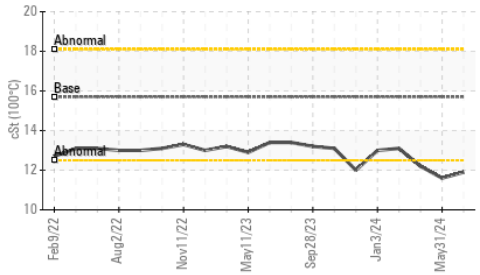
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0050847	LEC0049753	LEC0047236
Sample Date		Client Info		02 Jul 2024	31 May 2024	26 Apr 2024
Machine Age	hrs	Client Info		18141	17706	17232
Oil Age	hrs	Client Info		400	400	400
Filter Age	hrs	Client Info		400	400	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL
Iron	ppm	ASTM D5185m	>51	17	16	9
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		1	2	2
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	4	4	3
Lead	ppm	ASTM D5185m	>26	3	1	<1
Copper	ppm	ASTM D5185m	>26	<1	0	<1
Tin	ppm	ASTM D5185m	>4	0	1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>!20	5	6	9
Potassium	ppm	ASTM D5185m	>20	<1	2	3
Fuel	%	ASTM D3524	>2.1	▲ 6.9	▲ 7.7	▲ 5.2
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.9	9.6	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.3	23.6	22.0
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
Sodium	ppm	ASTM D5185m	>31	3	2	<1
Boron	ppm	ASTM D5185m	316	161	203	399
Barium	ppm	ASTM D5185m	0.0	0	<1	0
Molybdenum	ppm	ASTM D5185m	1.2	80	71	74
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	404	387	393
Calcium	ppm	ASTM D5185m	2292	1400	1219	1260
Phosphorus	ppm	ASTM D5185m	1064	946	894	897
Zinc	ppm	ASTM D5185m	1160	1127	1040	1044
Sulfur	ppm	ASTM D5185m	4996	3179	3087	3171
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8	20.2	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.2	6.1	7.3
Visc @ 100°C	cSt	ASTM D445	15.7	▲ 11.9	▲ 11.6	▲ 12.2

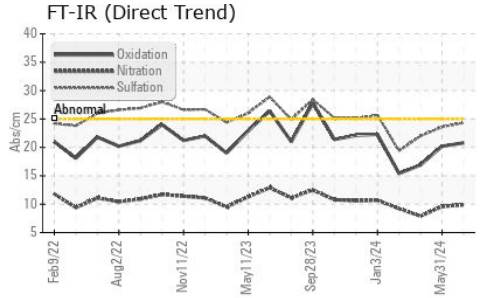
Fuel Dilution



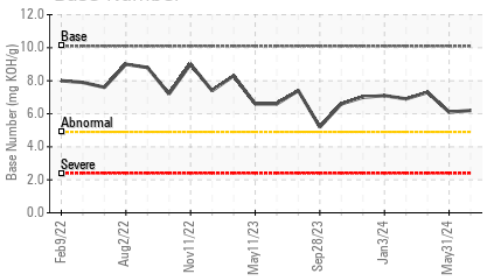
Viscosity @ 100°C



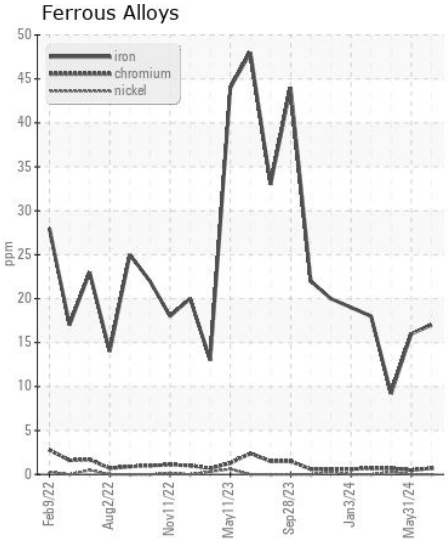
FT-IR (Direct Trend)



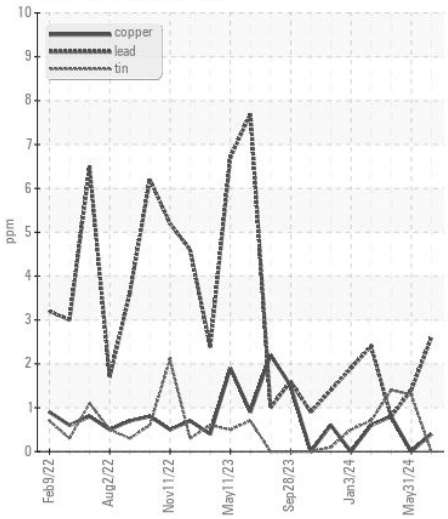
Base Number



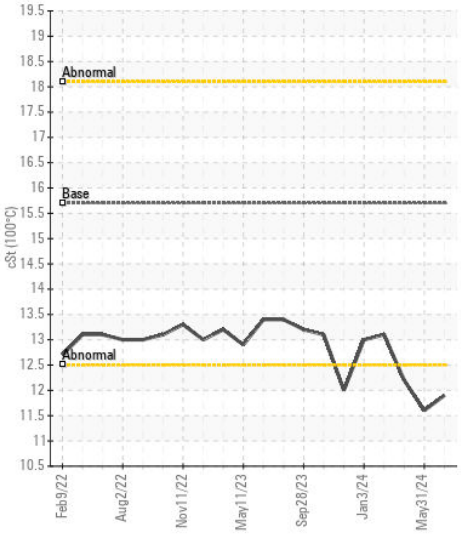
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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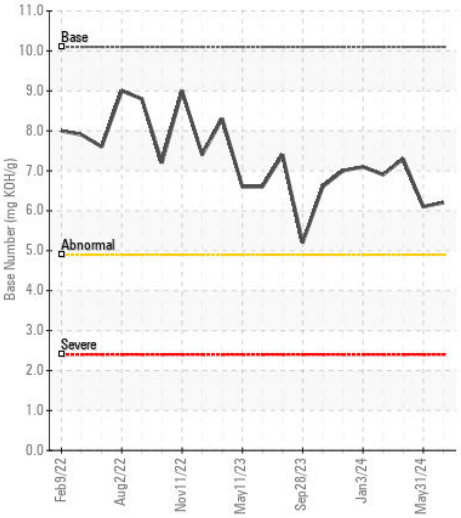

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0050847 **Received** : 11 Jul 2024
Lab Number : 06233121 **Tested** : 12 Jul 2024
Unique Number : 11116614 **Diagnosed** : 13 Jul 2024 - Don Baldridge
Test Package : CONST (Additional Tests: PercentFuel, 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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