



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta
Machine Id
JOHN DEERE 5092
Component
Diesel Engine
Fluid
LYDEN 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0049506	LEC0049465	LEC0043974
Sample Date		Client Info		15 May 2024	22 Mar 2024	26 Oct 2023
Machine Age	hrs	Client Info		2469	2211	1672
Oil Age	hrs	Client Info		258	534	265
Filter Age	hrs	Client Info		258	534	265
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	11	13	9
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	1	<1
Titanium	ppm	ASTM D5185m		63	8	73
Silver	ppm	ASTM D5185m	>3	1	0	0
Aluminum	ppm	ASTM D5185m	>31	2	4	4
Lead	ppm	ASTM D5185m	>26	1	0	0
Copper	ppm	ASTM D5185m	>26	3	4	3
Tin	ppm	ASTM D5185m	>4	1	0	<1
Vanadium	ppm	ASTM D5185m		1	<1	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.

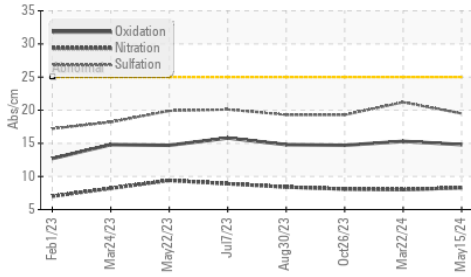
Silicon	ppm	ASTM D5185m	>120	8	9	7
Potassium	ppm	ASTM D5185m	>20	5	3	5
Fuel		WC Method	>2.1	<1.0	0.6	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.0	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	21.2	19.3
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

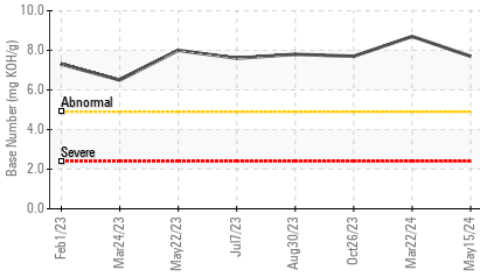
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	5	6	5
Boron	ppm	ASTM D5185m		102	153	102
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		30	164	13
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		429	649	380
Calcium	ppm	ASTM D5185m		1711	2672	1664
Phosphorus	ppm	ASTM D5185m		951	1112	837
Zinc	ppm	ASTM D5185m		1130	1414	1064
Sulfur	ppm	ASTM D5185m		3897	4664	3299
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	15.3	14.7
Base Number (BN)	mg KOH/g	ASTM D2896		7.7	8.7	7.7
Visc @ 100°C	cSt	ASTM D445		12.7	▲ 11.7	12.7

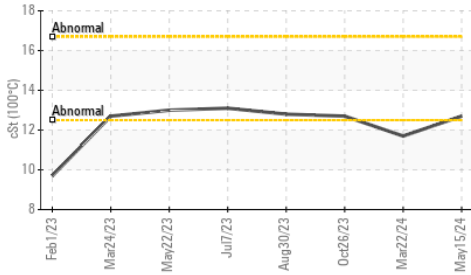
FT-IR (Direct Trend)



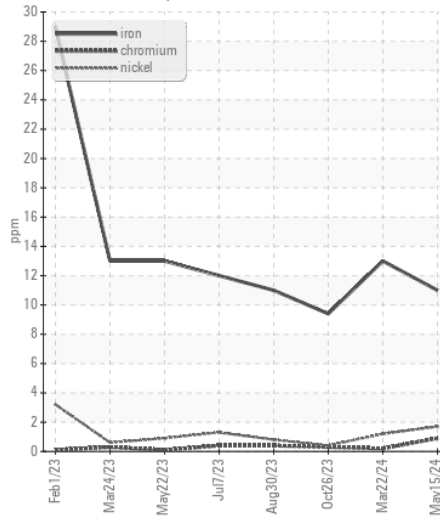
Base Number



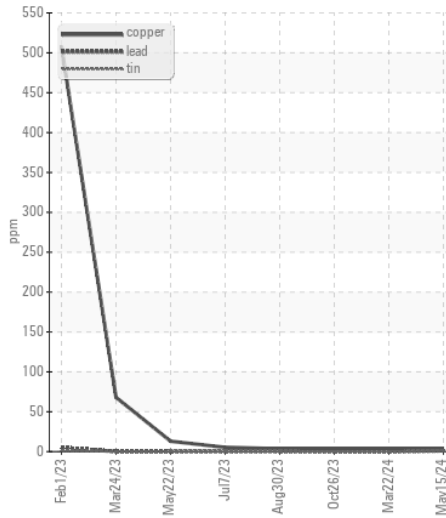
Viscosity @ 100°C



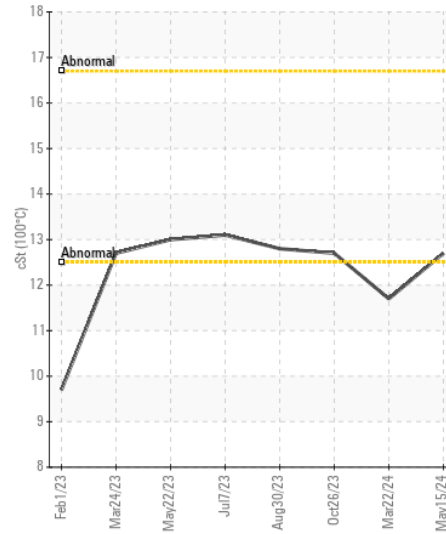
Ferrous Alloys



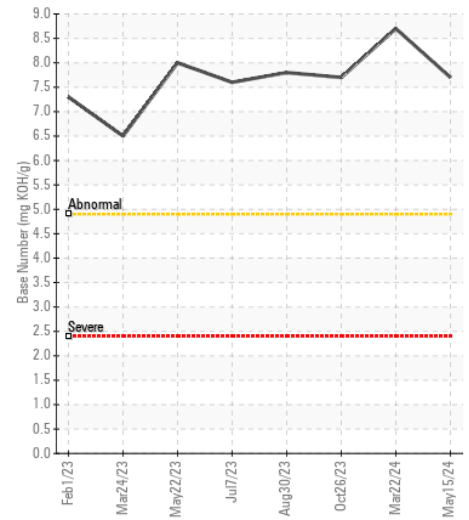
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049506 **Received** : 29 May 2024
Lab Number : 06193648 **Tested** : 30 May 2024
Unique Number : 11050400 **Diagnosed** : 30 May 2024 - Sean Felton
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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