LESLIE EQUIPMENT CO.

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Store 9 - Marietta
Machine Id
JOHN DEERE 1058
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

CONTAMINATION

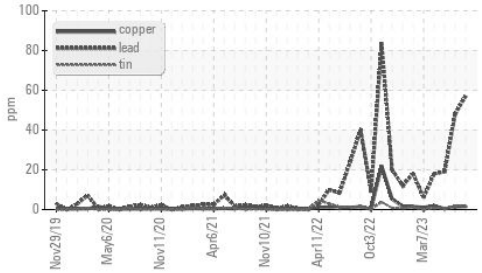
There is no indication of any contamination in the oil.

FLUID CONDITION

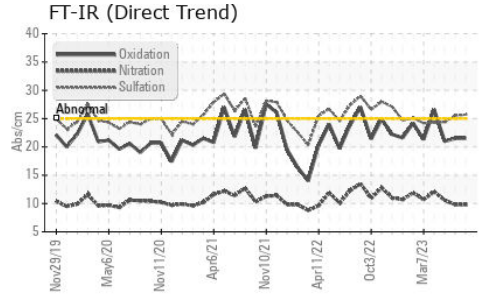
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LEC0049547	LEC0048271	LEC0048280
Sample Date		Client Info		05 May 2024	09 Apr 2024	09 Mar 2024
Machine Age	hrs	Client Info		25379	24893	24371
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				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	24	23	33
Chromium	ppm	ASTM D5185m	>20	1	1	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		2	2	3
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	5	4
Lead	ppm	ASTM D5185m	>40	▲ 57	▲ 48	19
Copper	ppm	ASTM D5185m	>330	2	1	<1
Tin	ppm	ASTM D5185m	>15	2	2	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>!20	9	9	16
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Fuel		WC Method	>5	<1.0	1.8	▲ 3.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.8	9.8	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	25.5	24.4
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		2	1	5
Boron	ppm	ASTM D5185m	316	163	179	138
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	86	97	107
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	24	450	499	710
Calcium	ppm	ASTM D5185m	2292	1503	1537	1668
Phosphorus	ppm	ASTM D5185m	1064	958	997	744
Zinc	ppm	ASTM D5185m	1160	1175	1151	885
Sulfur	ppm	ASTM D5185m	4996	3272	2953	3039
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.5	21.5	21.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.0	6.2	6.6
Visc @ 100°C	cSt	ASTM D445	15.7	12.8	12.9	▲ 12.4

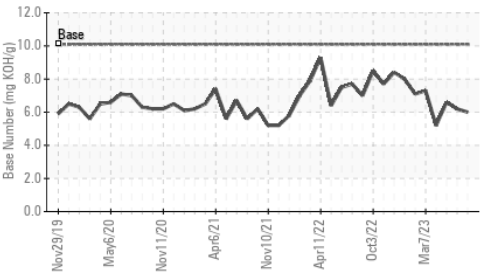
Non-ferrous Metals



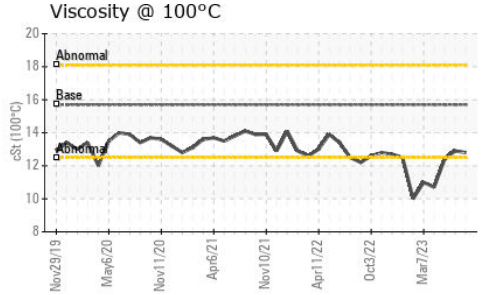
FT-IR (Direct Trend)



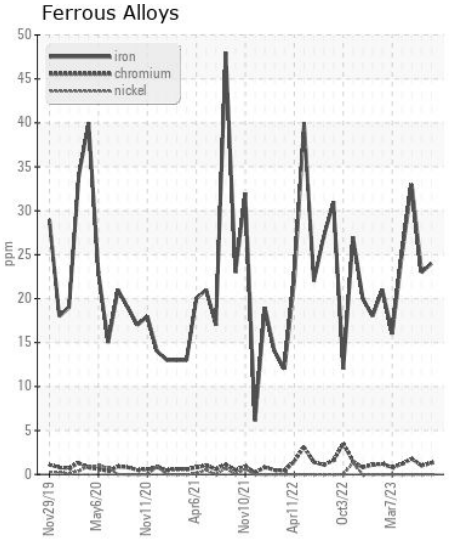
Base Number



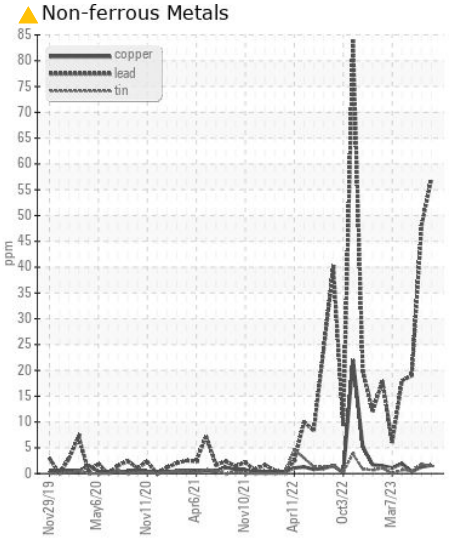
Viscosity @ 100°C



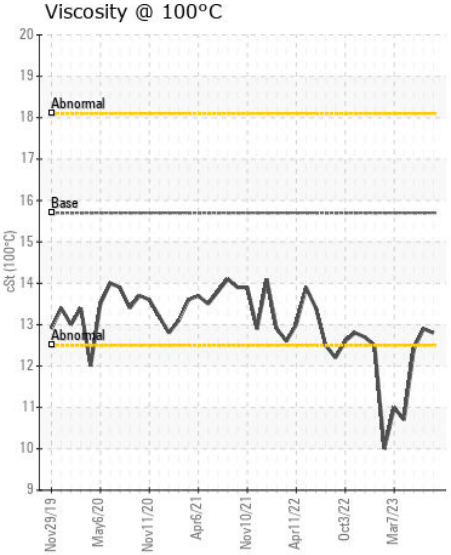
Ferrous Alloys



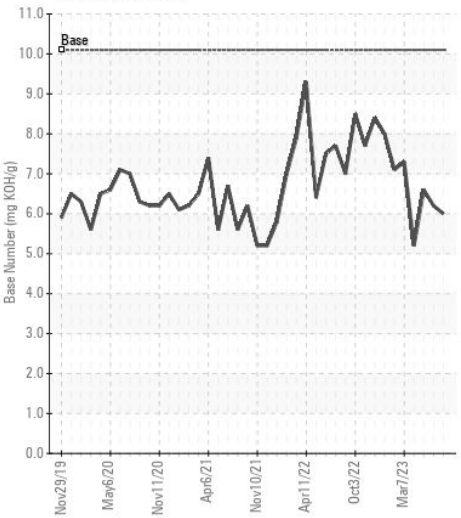
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LEC0049547 **Received** : 13 May 2024
Lab Number : 06176990 **Tested** : 14 May 2024
Unique Number : 11023043 **Diagnosed** : 14 May 2024 - Don Baldridge
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)

HALL DRILLING LLC
PO BOX 249
ELLENBORO, WV
US 26346
Contact: CHRIS PETROVICH
chrispetrovich@halldrilling.com
T: (304)869-3404
F: (304)869-3408