



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 850L 1T0850LXKNF426545
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (28 GAL)

RECOMMENDATION

No corrective action is recommended at this time. 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		JR0211359	JR0192035	JR0187790
Sample Date		Client Info		17 Apr 2024	11 Jan 2024	20 Sep 2023
Machine Age	hrs	Client Info		3461	2977	1944
Oil Age	hrs	Client Info		484	500	1944
Filter Age	hrs	Client Info		484	500	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ATTENTION	NORMAL

WEAR

Exhaust valve wear is indicated.

Iron	ppm	ASTM D5185m	>51	40	41	31
Chromium	ppm	ASTM D5185m	>11	2	<1	<1
Nickel	ppm	ASTM D5185m	>5	▲ 18	10	10
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	6	5	6
Lead	ppm	ASTM D5185m	>26	2	<1	<1
Copper	ppm	ASTM D5185m	>26	4	6	8
Tin	ppm	ASTM D5185m	>4	2	<1	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.

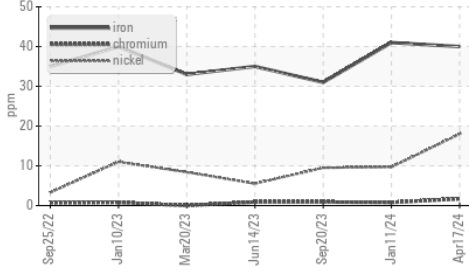
Silicon	ppm	ASTM D5185m	>22	11	11	11
Potassium	ppm	ASTM D5185m	>20	2	0	1
Fuel		WC Method	>2.1	<1.0	0.1	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.6	0
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.4	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	22.7	25.5
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

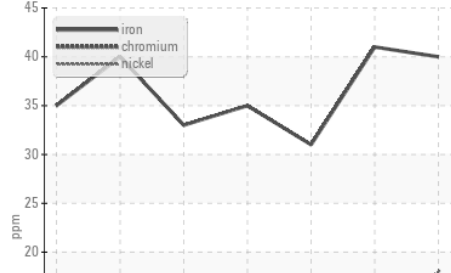
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	2	2	3
Boron	ppm	ASTM D5185m		181	147	234
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		217	183	267
Manganese	ppm	ASTM D5185m		2	<1	1
Magnesium	ppm	ASTM D5185m		743	618	861
Calcium	ppm	ASTM D5185m		1569	2184	1564
Phosphorus	ppm	ASTM D5185m		950	958	922
Zinc	ppm	ASTM D5185m		1067	1159	1134
Sulfur	ppm	ASTM D5185m		3224	3175	3620
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	15.4	17.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.5	9.1	9.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	● 12.0	13.8

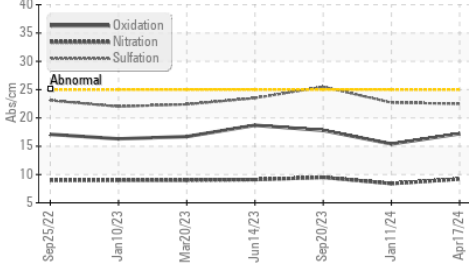
▲ Ferrous Alloys



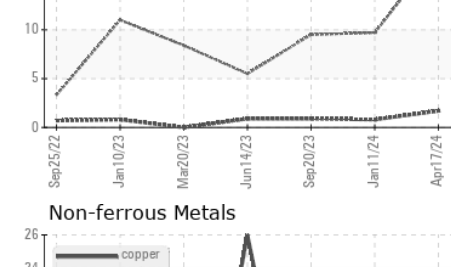
▲ Ferrous Alloys



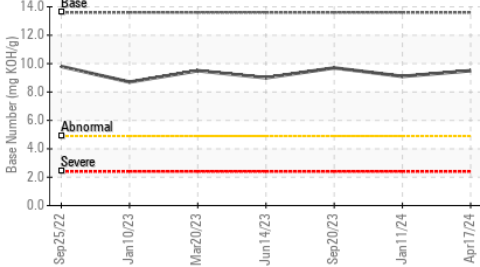
FT-IR (Direct Trend)



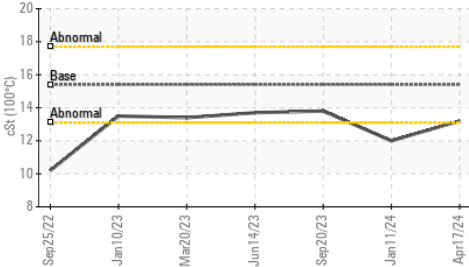
Non-ferrous Metals



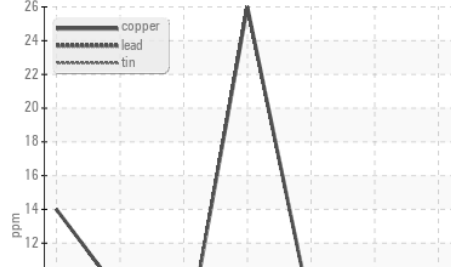
Base Number



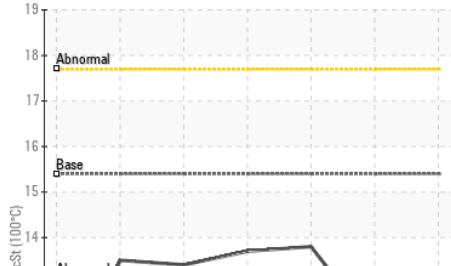
Viscosity @ 100°C



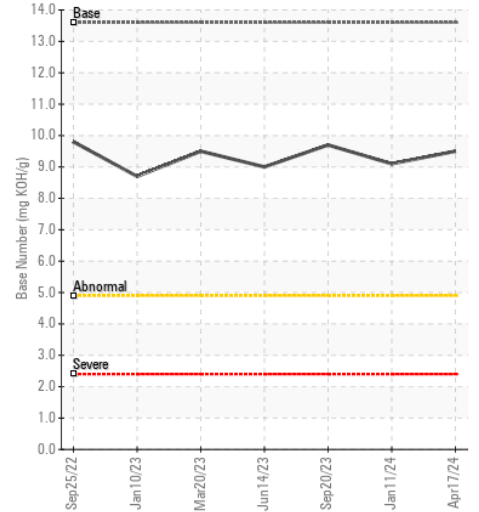
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0211359 **Received** : 18 Apr 2024
Lab Number : 06152901 **Tested** : 19 Apr 2024
Unique Number : 10982979 **Diagnosed** : 22 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: 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)