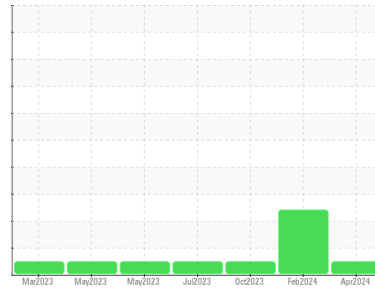




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
JOHN DEERE 8R310 11613 (S/N 1RW8310DENB201038)
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0913160	WC0888081	WC0862854
Sample Date	Client Info			02 Apr 2024	29 Feb 2024	09 Oct 2023
Machine Age	hrs	Client Info		4560	4049	3189
Oil Age	hrs	Client Info		511	860	377
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<1.0	<1.0	<1.0	
Water	WC Method	>0.21	NEG	NEG	NEG	
Glycol	WC Method		NEG	NEG	NEG	

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	34	▲ 65	25
Chromium	ppm	ASTM D5185m	>11	<1	2	<1
Nickel	ppm	ASTM D5185m	>5	3	▲ 21	4
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	3	2
Lead	ppm	ASTM D5185m	>26	3	3	1
Copper	ppm	ASTM D5185m	>26	10	▲ 35	5
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	3	3	4
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	59	59	59
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	998	937	962
Calcium	ppm	ASTM D5185m	3000	1366	1167	1152
Phosphorus	ppm	ASTM D5185m	1150	1141	958	996
Zinc	ppm	ASTM D5185m	1350	1427	1179	1277
Sulfur	ppm	ASTM D5185m	4250	3540	2441	2939

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	4	5	4
Sodium	ppm	ASTM D5185m	>216	1	2	<1
Potassium	ppm	ASTM D5185m	>20	2	0	0

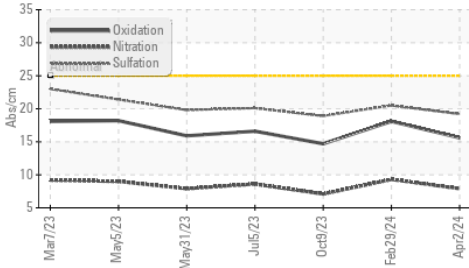
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.9	9.3	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	20.5	18.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	18.1	14.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.2	7.1	8.9

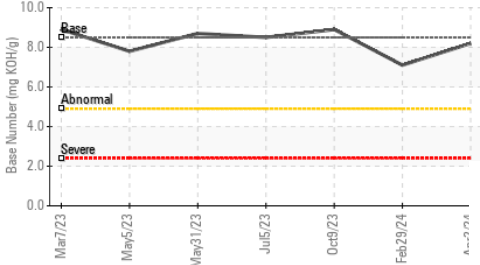


OIL ANALYSIS REPORT

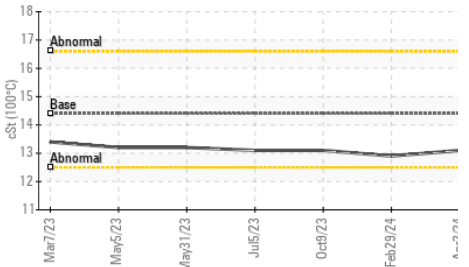
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

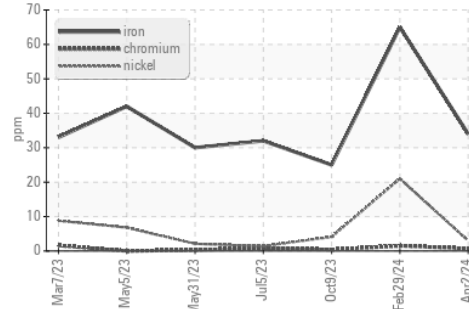


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

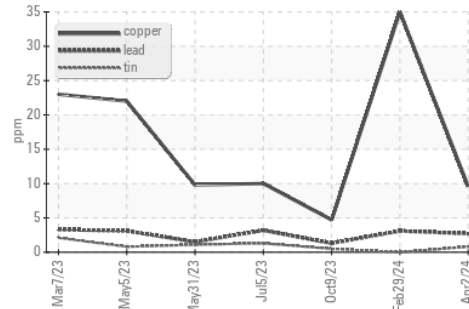
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.1	12.9

GRAPHS

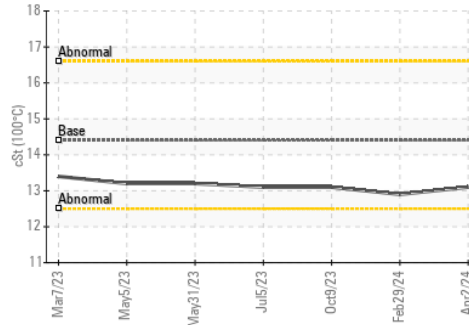
Ferrous Alloys



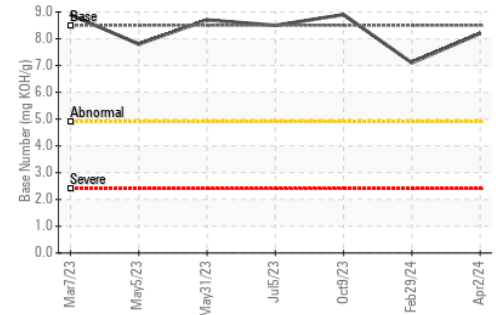
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0913160

Lab Number : 06147043

Unique Number : 10977121

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)

Received : 12 Apr 2024

Tested : 15 Apr 2024

Diagnosed : 15 Apr 2024 - Wes Davis

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US 28563

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