



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 310E RD301 (S/N 1DW310EXTKF696752)
 Component
Diesel Engine
 Fluid
MOBIL DELVAC 1200 SP15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0138430	JR0138474	JR0138478
Sample Date		Client Info		22 Apr 2024	11 Oct 2023	12 Jan 2023
Machine Age	hrs	Client Info		5030	4480	3457
Oil Age	hrs	Client Info		500	1000	42
Filter Age	hrs	Client Info		500	1000	3415
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	19	40	12
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	2	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	7	2
Lead	ppm	ASTM D5185m	>26	0	<1	<1
Copper	ppm	ASTM D5185m	>26	2	4	<1
Tin	ppm	ASTM D5185m	>4	0	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
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.

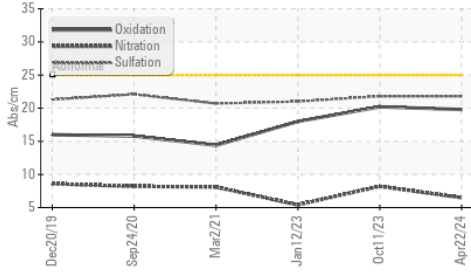
Silicon	ppm	ASTM D5185m	>22	7	6	9
Potassium	ppm	ASTM D5185m	>20	0	2	0
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.5	8.2	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	21.8	21.0
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

FLUID CONDITION

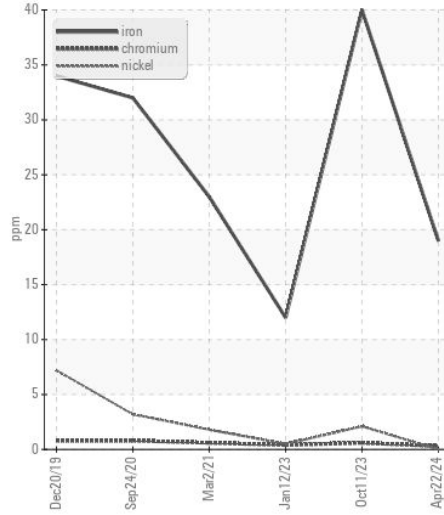
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<1	0	2
Boron	ppm	ASTM D5185m		44	27	67
Barium	ppm	ASTM D5185m		0	10	0
Molybdenum	ppm	ASTM D5185m		45	54	50
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		529	492	490
Calcium	ppm	ASTM D5185m		1882	1704	1747
Phosphorus	ppm	ASTM D5185m		835	777	753
Zinc	ppm	ASTM D5185m		985	933	890
Sulfur	ppm	ASTM D5185m		3043	2749	3286
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	20.2	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	7.8	10.1	9.2	9.9
Visc @ 100°C	cSt	ASTM D445	15.0	12.5	12.5	12.5

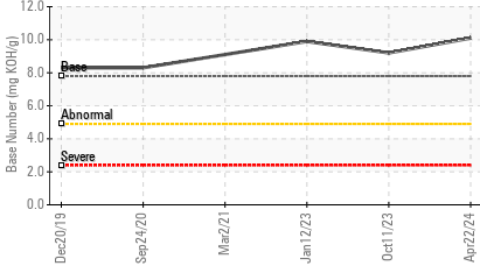
FT-IR (Direct Trend)



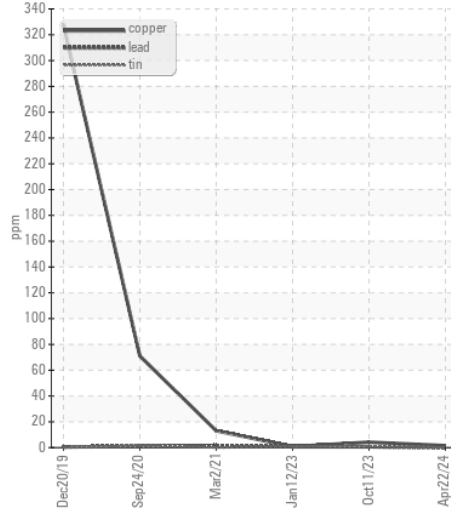
Ferrous Alloys



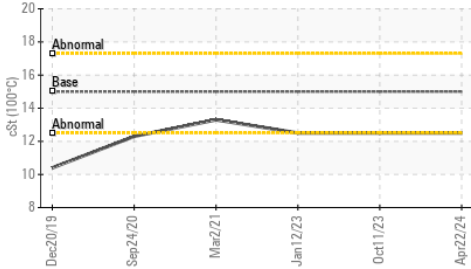
Base Number



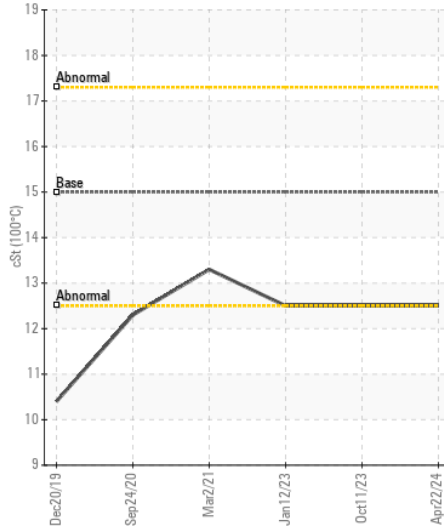
Non-ferrous Metals



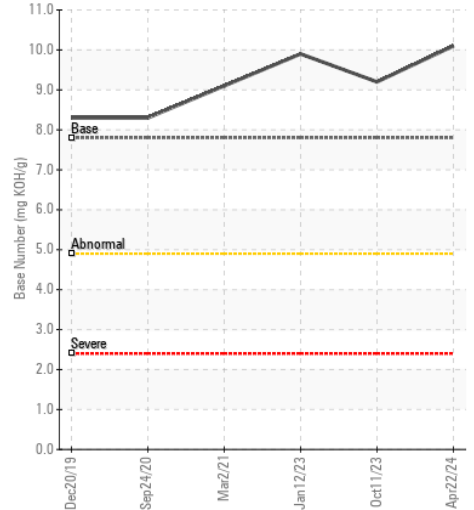
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0138430 **Received** : 24 Apr 2024
Lab Number : 06158861 **Tested** : 25 Apr 2024
Unique Number : 10994284 **Diagnosed** : 25 Apr 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

YATES CONSTRUCTION
 9220 NC-65
 STOKESDALE, NC
 US 27357
 Contact: Y. YORK
 yyork@yatesconstruction.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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F: