



WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	ATTENTION



Machine Id
JOHN DEERE 624K 1DW624KZEB0635411
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (5 GAL)

RECOMMENDATION

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		JR0201411	JR0201394	JR0201396
Sample Date		Client Info		02 Apr 2024	11 Mar 2024	09 Feb 2024
Machine Age	hrs	Client Info		29188	28972	28765
Oil Age	hrs	Client Info		216	207	228
Filter Age	hrs	Client Info		216	207	228
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	7	9	5
Chromium	ppm	ASTM D5185m	>11	0	<1	0
Nickel	ppm	ASTM D5185m	>5	<1	1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	1	2	2
Lead	ppm	ASTM D5185m	>26	0	2	5
Copper	ppm	ASTM D5185m	>26	<1	3	3
Tin	ppm	ASTM D5185m	>4	<1	<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

Sodium and/or potassium levels remain elevated. Test for glycol is negative.

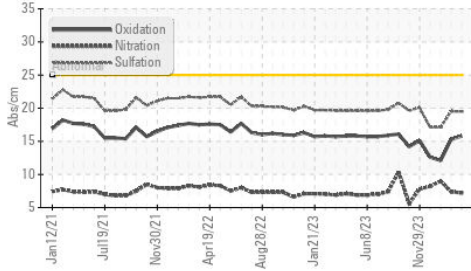
Silicon	ppm	ASTM D5185m	>22	8	▲ 21	▲ 32
Potassium	ppm	ASTM D5185m	>20	● 33	▲ 135	▲ 260
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.4	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	19.5	17.1
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

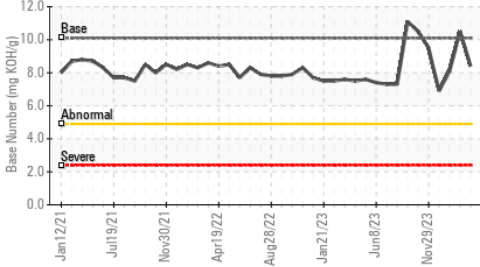
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	● 77	▲ 346	▲ 617
Boron	ppm	ASTM D5185m	316	93	43	110
Barium	ppm	ASTM D5185m	0.0	0	<1	<1
Molybdenum	ppm	ASTM D5185m	1.2	18	63	84
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	194	517	50
Calcium	ppm	ASTM D5185m	2292	2012	1626	1783
Phosphorus	ppm	ASTM D5185m	1064	1041	1201	1009
Zinc	ppm	ASTM D5185m	1160	1220	1276	1077
Sulfur	ppm	ASTM D5185m	4996	3811	3546	3910
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	15.3	12.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.4	10.5	8.1
Visc @ 100°C	cSt	ASTM D445	15.7	14.6	13.9	14.8

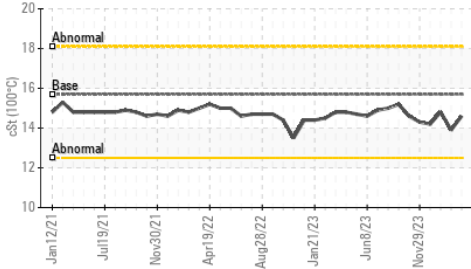
FT-IR (Direct Trend)



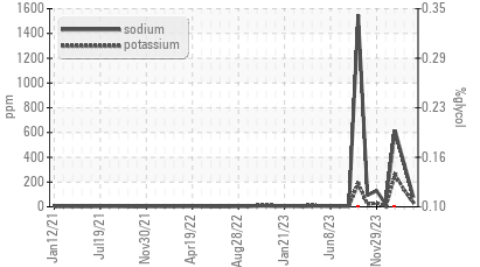
Base Number



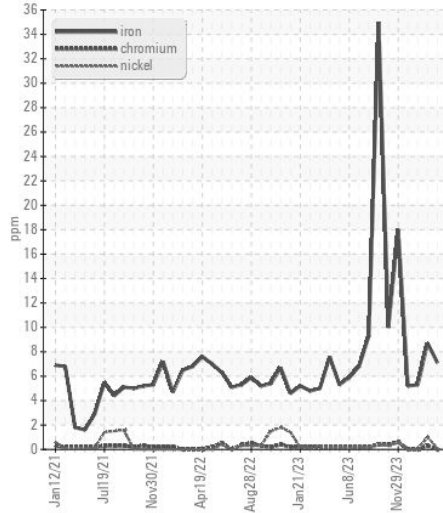
Viscosity @ 100°C



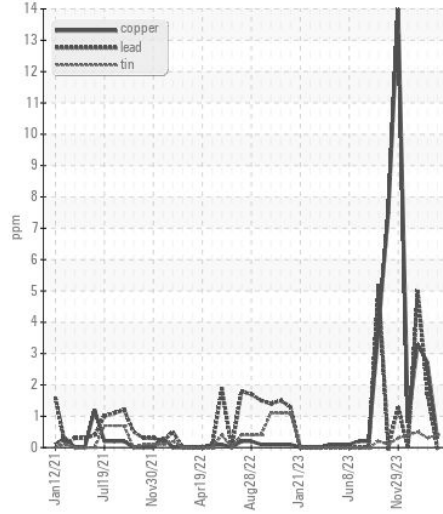
Glycol Contamination



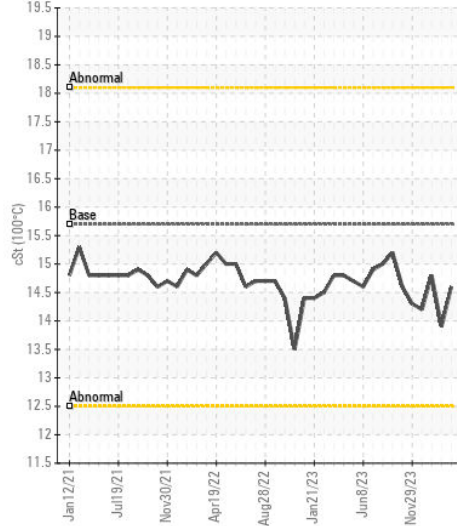
Ferrous Alloys



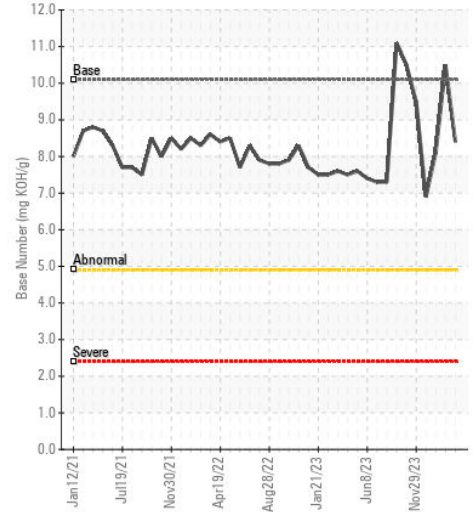
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : JR0201411

Lab Number : 06196371

Unique Number : 11058494

Test Package : CONST (Additional Tests: Glycol, TBN)

Received : 31 May 2024

Tested : 04 Jun 2024

Diagnosed : 04 Jun 2024 - Jonathan Hester

Baxter Healthcare - Wood Boiler Biomass

2859 OLD LINVILLE RD

MARION, NC

US 28752

Contact: RICKY STYLES

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F:

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)