



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL



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

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0201396	JR0201391	JR0160642
Sample Date		Client Info		09 Feb 2024	09 Jan 2024	29 Nov 2023
Machine Age	hrs	Client Info		28765	28536	28329
Oil Age	hrs	Client Info		228	207	217
Filter Age	hrs	Client Info		228	207	217
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	5	5	18
Chromium	ppm	ASTM D5185m	>11	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	2	2	6
Lead	ppm	ASTM D5185m	>26	5	0	1
Copper	ppm	ASTM D5185m	>26	3	<1	14
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

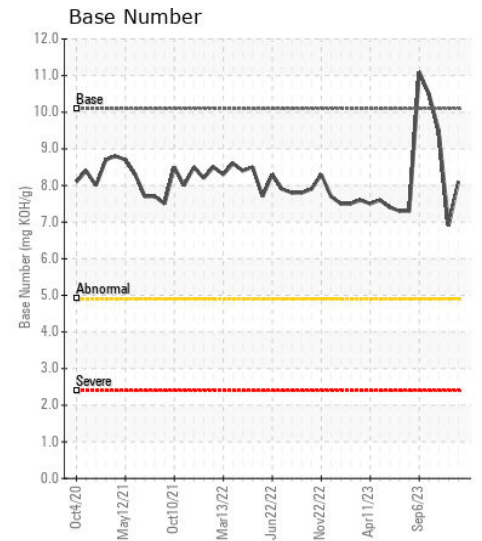
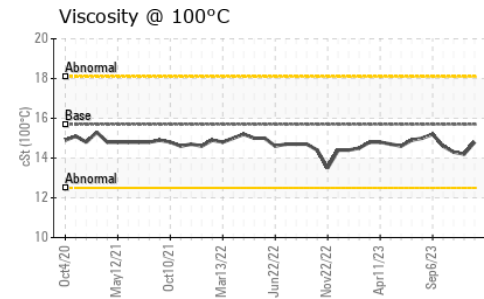
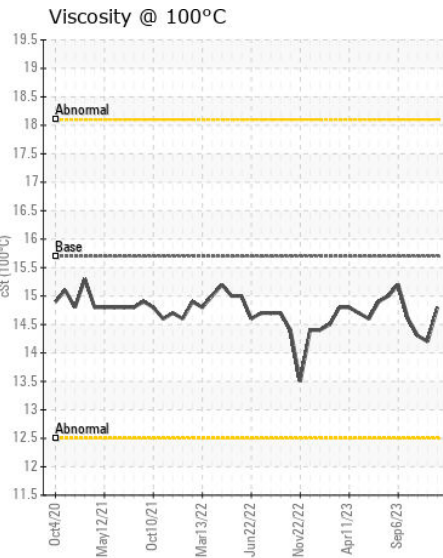
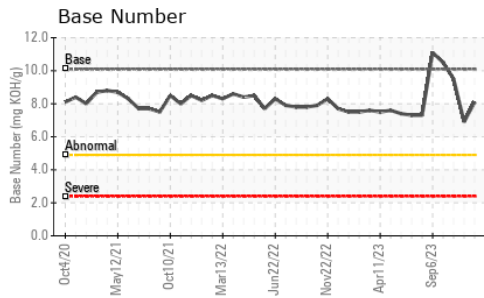
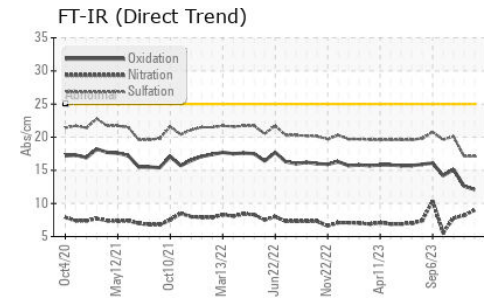
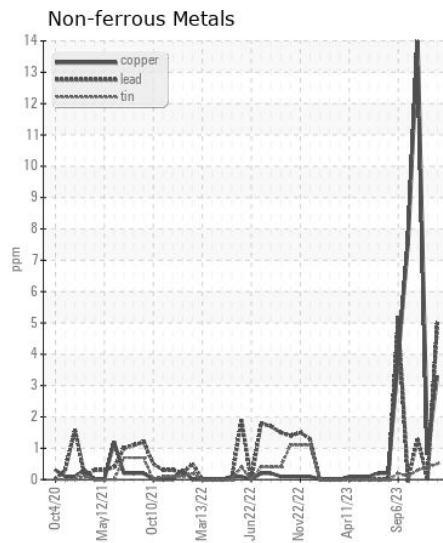
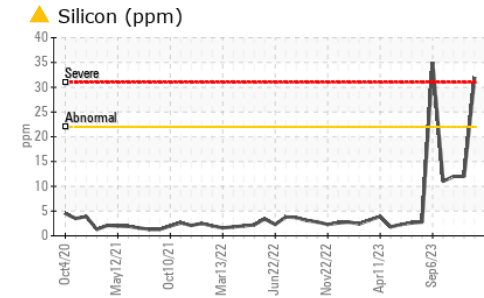
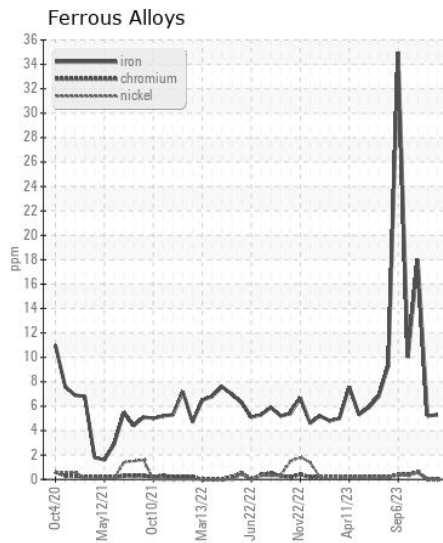
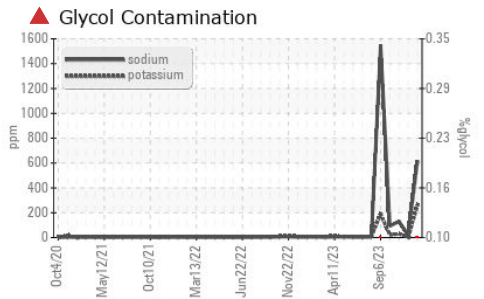
Sodium and/or potassium levels are high. Test for glycol is positive. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>22	▲ 32	12	12
Potassium	ppm	ASTM D5185m	>20	▲ 260	4	30
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.10	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.0	8.2	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	17.1	20.1
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>31	▲ 617	19	● 130
Boron	ppm	ASTM D5185m	316	110	81	313
Barium	ppm	ASTM D5185m	0.0	<1	<1	2
Molybdenum	ppm	ASTM D5185m	1.2	84	94	274
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	50	87	824
Calcium	ppm	ASTM D5185m	2292	1783	2084	1512
Phosphorus	ppm	ASTM D5185m	1064	1009	1002	1077
Zinc	ppm	ASTM D5185m	1160	1077	1172	1186
Sulfur	ppm	ASTM D5185m	4996	3910	4124	3555
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.1	12.6	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.1	6.9	9.5
Visc @ 100°C	cSt	ASTM D445	15.7	14.8	14.2	14.3



Certificate L2367

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

Sample No. : JR0201396

Lab Number : 06196378

Unique Number : 11058501

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)