



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 624K 1DW624KZEEE657948
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (5 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0160640	JR0160638	JR0160636
Sample Date		Client Info		12 Oct 2023	21 Sep 2023	28 Aug 2023
Machine Age	hrs	Client Info		12412	12226	12018
Oil Age	hrs	Client Info		186	208	206
Filter Age	hrs	Client Info		186	208	206
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	8	8	15
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	2	3	4
Lead	ppm	ASTM D5185m	>26	<1	<1	<1
Copper	ppm	ASTM D5185m	>26	<1	<1	<1
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

There is no indication of any contamination in the oil.

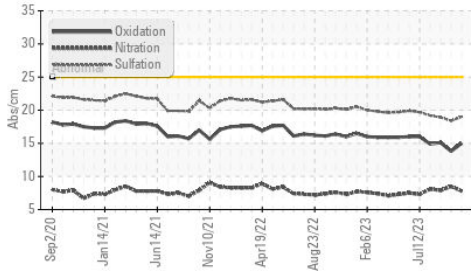
Silicon	ppm	ASTM D5185m	>22	13	4	5
Potassium	ppm	ASTM D5185m	>20	3	4	19
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.8	8.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	18.4	18.9
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

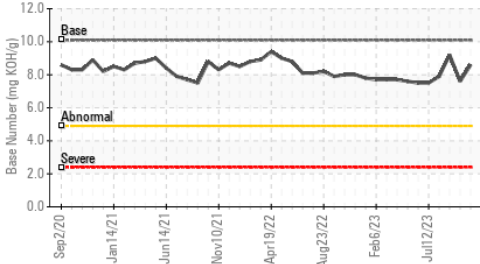
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	4	4	6
Boron	ppm	ASTM D5185m	316	37	60	285
Barium	ppm	ASTM D5185m	0.0	<1	<1	<1
Molybdenum	ppm	ASTM D5185m	1.2	51	83	2
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	24	493	37	24
Calcium	ppm	ASTM D5185m	2292	1553	2221	3647
Phosphorus	ppm	ASTM D5185m	1064	1169	1131	1736
Zinc	ppm	ASTM D5185m	1160	1255	1227	1967
Sulfur	ppm	ASTM D5185m	4996	3522	4238	6371
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	13.8	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.6	7.6	9.2
Visc @ 100°C	cSt	ASTM D445	15.7	14.2	14.6	14.9

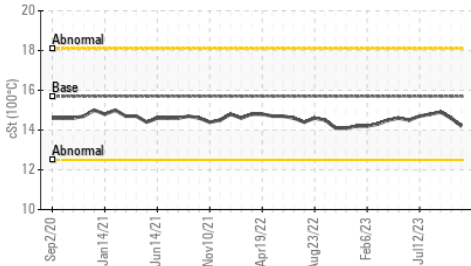
FT-IR (Direct Trend)



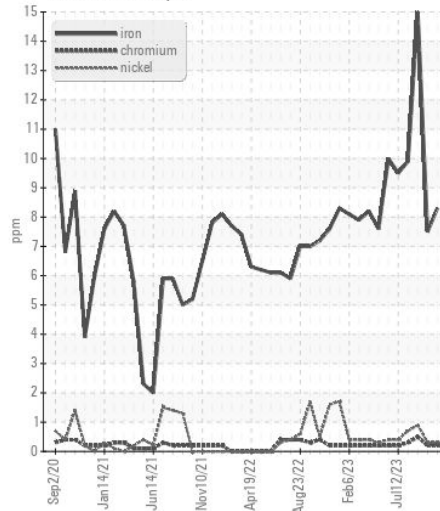
Base Number



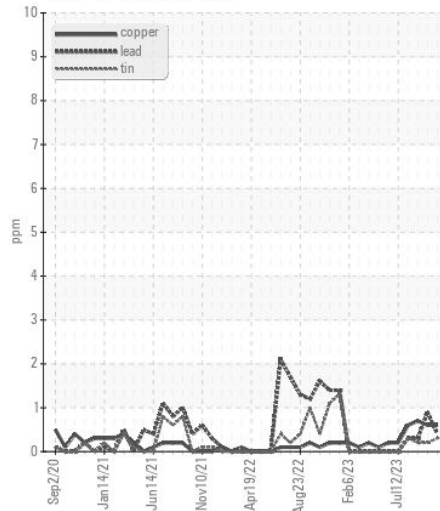
Viscosity @ 100°C



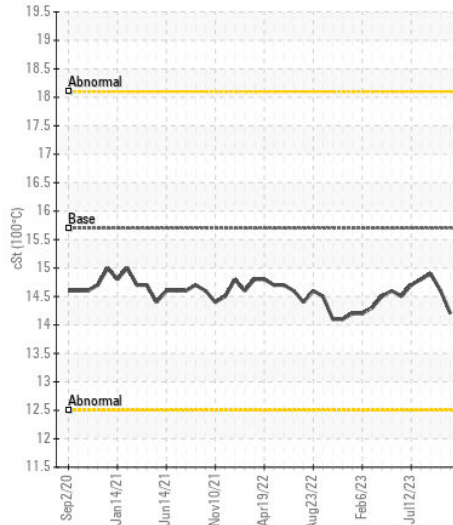
Ferrous Alloys



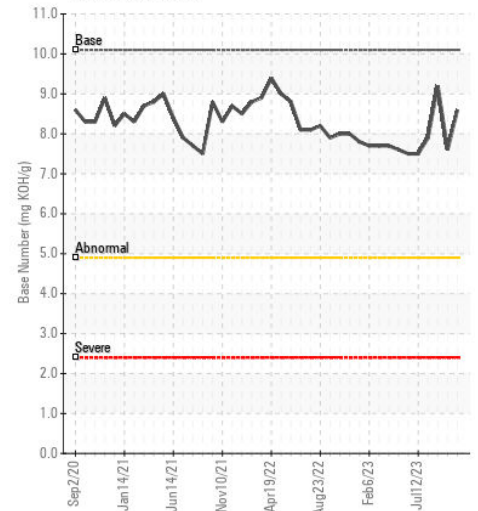
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : JR0160640

Lab Number : 06196358

Unique Number : 11058481

Test Package : CONST (Additional Tests: TBN)

Received : 31 May 2024

Tested : 03 Jun 2024

Diagnosed : 03 Jun 2024 - Wes Davis

Baxter Healthcare - Wood Boiler Biomass

2859 OLD LINVILLE RD

MARION, NC

US 28752

Contact: RICKY STYLES

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T: (828)756-4946

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)