



WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area

[W20726-WINDY HILL]

Machine Id

JOHN DEERE 3520 1LV3520HJDH910183

Component

Diesel Engine

Fluid

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil 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		JR0196594	JR0148859	JR0085296
Sample Date		Client Info		01 Jan 2024	05 Jan 2023	23 Apr 2021
Machine Age	hrs	Client Info		79	76	44
Oil Age	hrs	Client Info		3	0	44
Filter Age	hrs	Client Info		3	0	44
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>51	<1	4	6
Chromium	ppm	ASTM D5185m	>11	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>31	4	<1	6
Lead	ppm	ASTM D5185m	>26	<1	<1	2
Copper	ppm	ASTM D5185m	>26	10	33	42
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

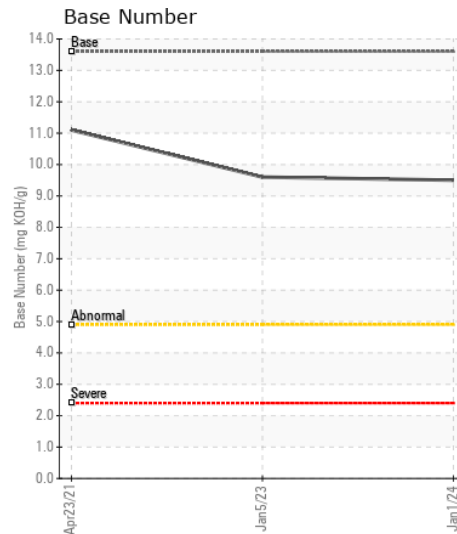
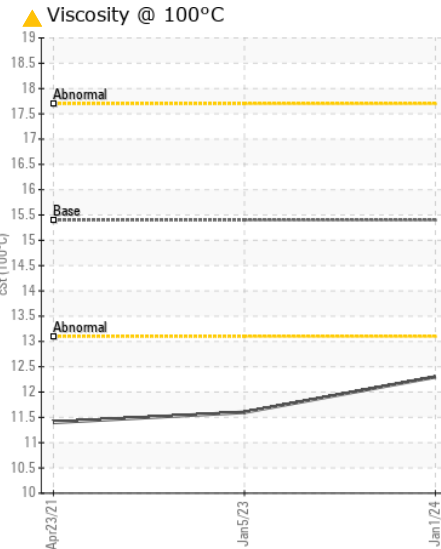
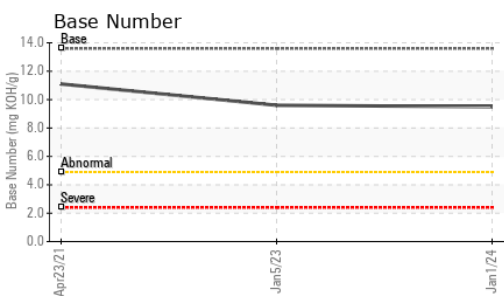
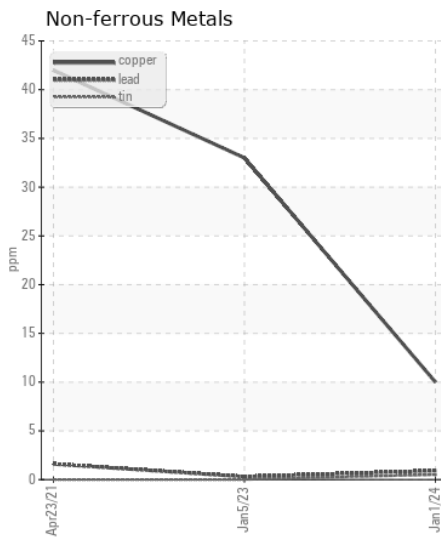
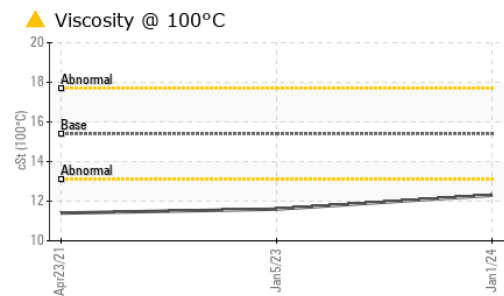
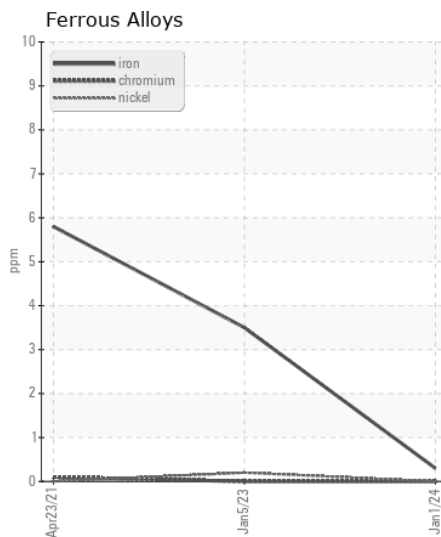
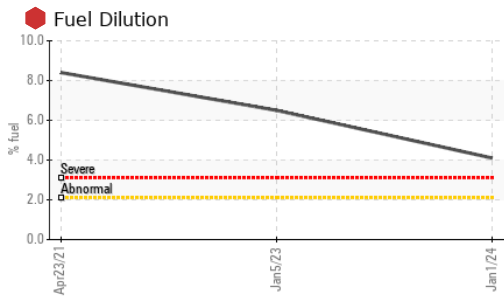
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>22	8	9	14
Potassium	ppm	ASTM D5185m	>20	<1	2	6
Fuel	%	ASTM D3524	>2.1	4.1	6.5	8.4
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.3	6.1	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	18.6	20.4
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. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>31	2	1	3
Boron	ppm	ASTM D5185m		260	227	235
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		241	220	198
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		856	691	670
Calcium	ppm	ASTM D5185m		1381	1248	1202
Phosphorus	ppm	ASTM D5185m		981	792	779
Zinc	ppm	ASTM D5185m		1146	925	832
Sulfur	ppm	ASTM D5185m		3272	2525	2358
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	13.4	15
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.5	9.6	11.1
Visc @ 100°C	cSt	ASTM D445	15.4	12.3	11.6	11.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0196594 **Received** : 08 Jan 2024
Lab Number : 06054556 **Diagnosed** : 12 Jan 2024
Unique Number : 10820505 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, 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)

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