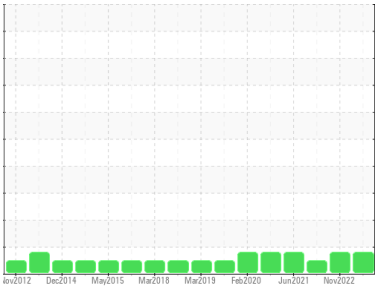
PROBLEM SUMMARY

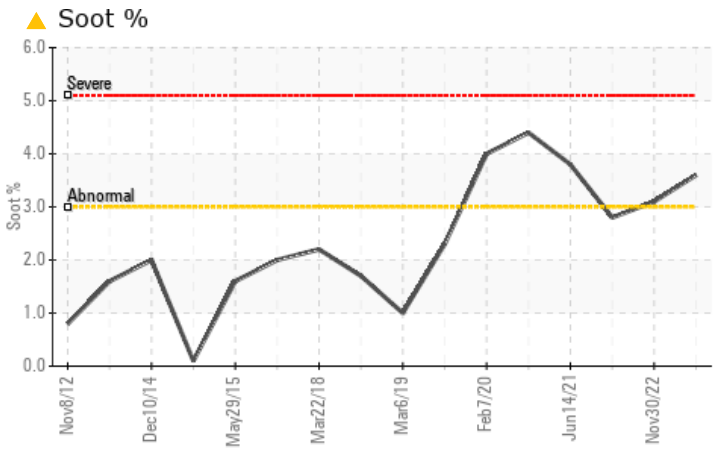
Machine Id
JOHN DEERE 310SJ 1T0310SJHBD209337 (S/N 1T03105JHBD209337)
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (4 GAL)

Sample Rating Trend



SOOT

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	NORMAL
Soot %	%	*ASTM D7844	>3	▲ **3.6**	▲ 3.1	2.8

Customer Id: TENCAN
Sample No.: JR0176900
Lab Number: 05902124
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Angela Borella +1 800-237-1369
angela.borella@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

30 Nov 2022 Diag: Wes Davis

SOOT

The oil change at the time of sampling has been noted.All component wear rates are normal. Light concentration of carbon/soot present in the oil. 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.

view report

31 May 2022 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

14 Jun 2021 Diag: Don Baldridge

SOOT

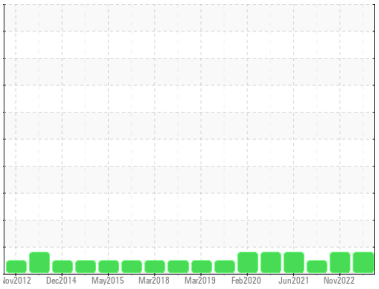
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Machine Id
JOHN DEERE 310SJ 1T0310SJHBD209337 (S/N 1T03105JHBD209337)
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (4 GAL)

Sample Rating Trend



SOOT

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light concentration of carbon/soot present in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**JR0176900**	JR0141604	JR0131512
Sample Date		Client Info		**11 Jul 2023**	30 Nov 2022	31 May 2022
Machine Age	hrs	Client Info		**6370**	6118	5917
Oil Age	hrs	Client Info		**252**	201	338
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	**24**	11	18
Chromium	ppm	ASTM D5185m	>11	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>31	**4**	3	4
Lead	ppm	ASTM D5185m	>26	**<1**	0	<1
Copper	ppm	ASTM D5185m	>26	**2**	1	6
Tin	ppm	ASTM D5185m	>4	**<1**	0	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**283**	299	264
Barium	ppm	ASTM D5185m		**0**	0	3
Molybdenum	ppm	ASTM D5185m		**257**	245	232
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**907**	797	725
Calcium	ppm	ASTM D5185m		**1585**	1479	1263
Phosphorus	ppm	ASTM D5185m		**963**	873	818
Zinc	ppm	ASTM D5185m		**1149**	1024	1003
Sulfur	ppm	ASTM D5185m		**3853**	3519	2755

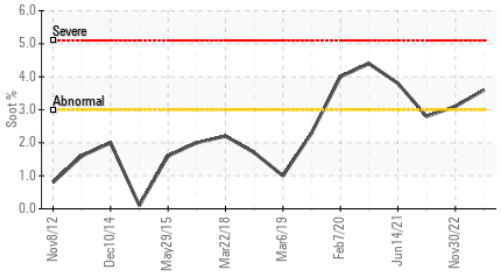
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	**7**	6	7
Sodium	ppm	ASTM D5185m	>31	**2**	0	0
Potassium	ppm	ASTM D5185m	>20	**2**	0	1
Fuel	%	ASTM D3524	>2.1	**<1.0**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	▲ **3.6**	▲ 3.1	2.8
Nitration	Abs/cm	*ASTM D7624	>20	**10.7**	10.3	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.9**	26.8	24.8

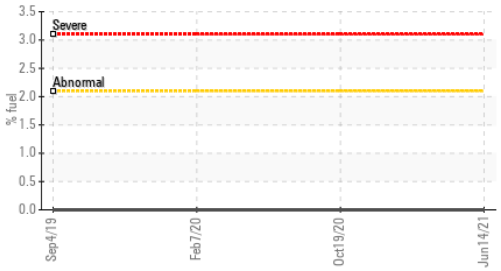
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.9**	16.6	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	**7.9**	9.7	9.0

OIL ANALYSIS REPORT

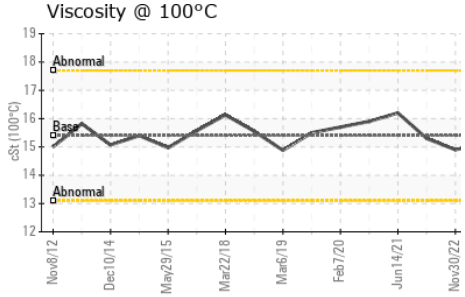
Soot %



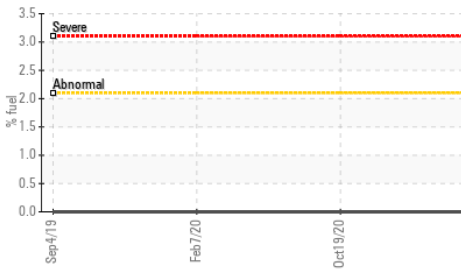
Fuel Dilution



Viscosity @ 100°C



Fuel Dilution

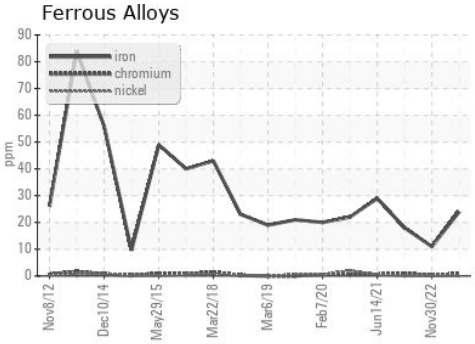


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

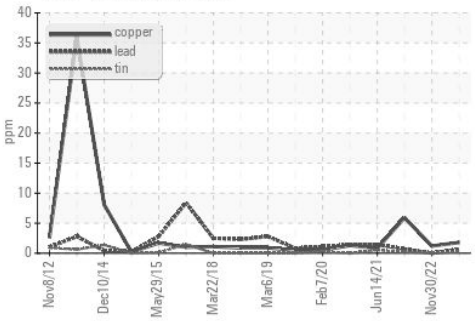
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**15.1**	14.9	15.3

GRAPHS

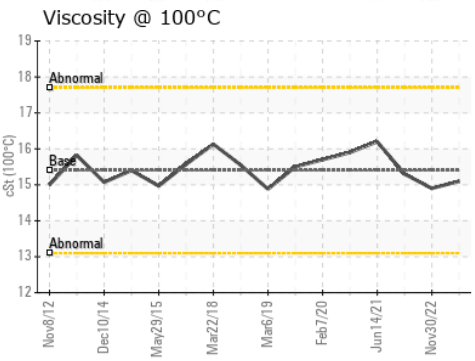
Ferrous Alloys



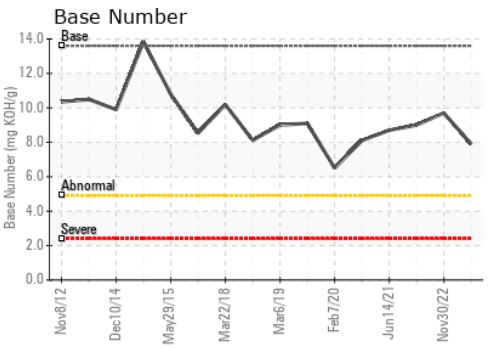
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0176900 **Received** : 19 Jul 2023
Lab Number : 05902124 **Diagnosed** : 20 Jul 2023
Unique Number : 10563480 **Diagnostician** : Angela Borella
Test Package : CONST (Additional Tests: FuelDilution, 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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