



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI 210-6 1ffdc571jmf341002

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0204947	JR0194111	JR0182604
Sample Date		Client Info		19 Mar 2024	28 Nov 2023	23 Aug 2023
Machine Age	hrs	Client Info		2924	2466	2007
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	5	5	4
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	4
Lead	ppm	ASTM D5185m	>40	0	2	0
Copper	ppm	ASTM D5185m	>330	<1	2	8
Tin	ppm	ASTM D5185m	>15	0	1	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

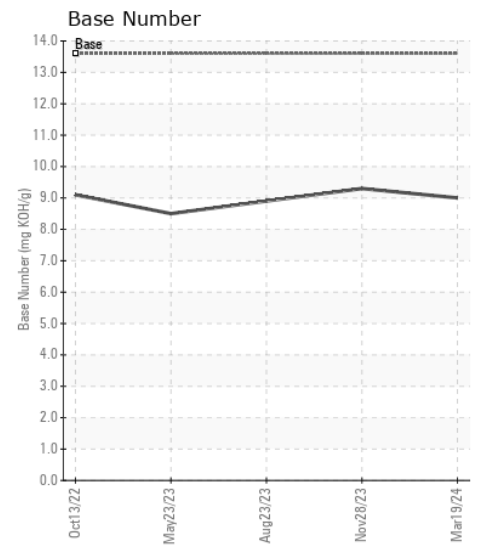
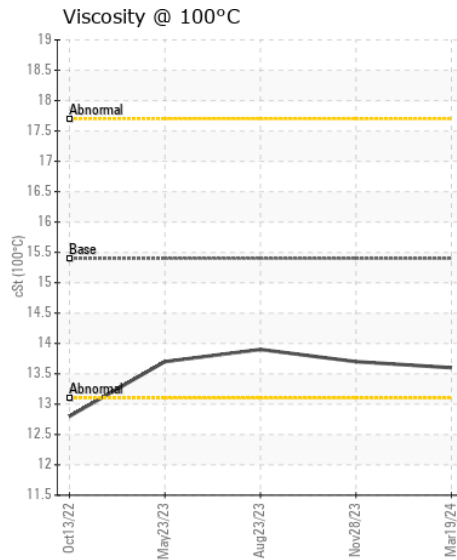
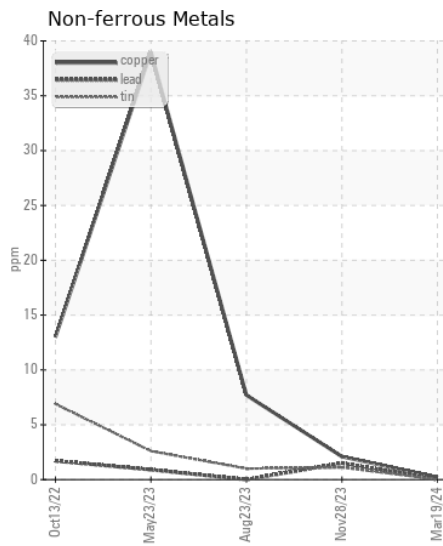
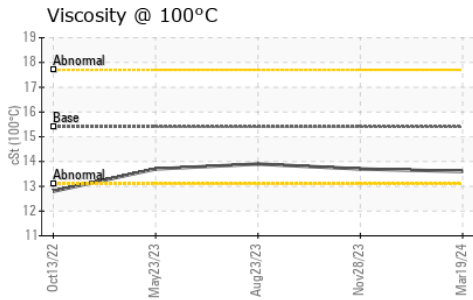
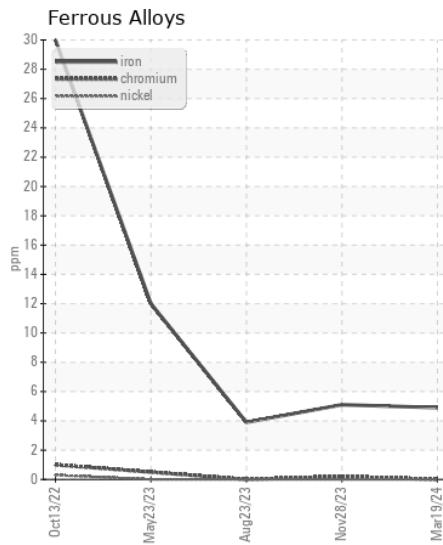
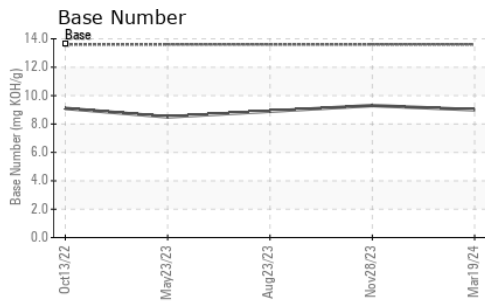
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	8
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.5	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	20.6	19.9
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	>0.2	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		1	2	1
Boron	ppm	ASTM D5185m		234	226	280
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		249	239	257
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		848	844	865
Calcium	ppm	ASTM D5185m		1506	1513	1505
Phosphorus	ppm	ASTM D5185m		952	869	895
Zinc	ppm	ASTM D5185m		1127	1131	1090
Sulfur	ppm	ASTM D5185m		3641	2946	3594
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	14.9	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.0	9.3	8.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.7	13.9



Certificate L2367

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

Sample No. : JR0204947

Lab Number : 06123318

Unique Number : 10937469

Test Package : CONST (Additional Tests: TBN)

Received : 20 Mar 2024

Tested : 21 Mar 2024

Diagnosed : 21 Mar 2024 - Wes Davis

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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