



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HITACHI 870 HCMJBL60C00060052
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WE0006754	WE0006509	WE0006493
Sample Date		Client Info		10 May 2024	05 Mar 2024	12 Dec 2023
Machine Age	hrs	Client Info		12506	12002	11500
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	19	57	39
Chromium	ppm	ASTM D5185m	>20	<1	2	2
Nickel	ppm	ASTM D5185m	>4	<1	9	1
Titanium	ppm	ASTM D5185m		74	<1	55
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	8	3	9
Lead	ppm	ASTM D5185m	>40	<1	4	3
Copper	ppm	ASTM D5185m	>330	2	49	4
Tin	ppm	ASTM D5185m	>15	<1	4	1
Vanadium	ppm	ASTM D5185m		1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

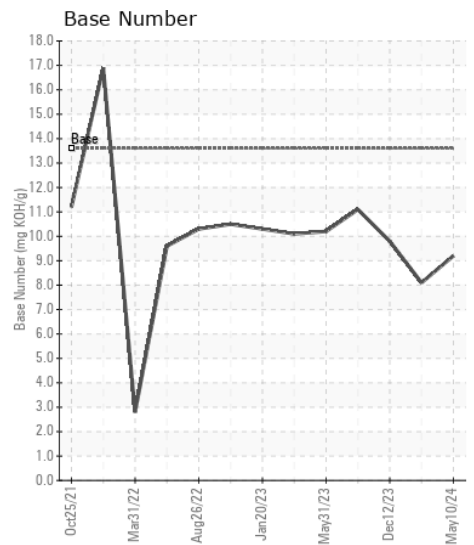
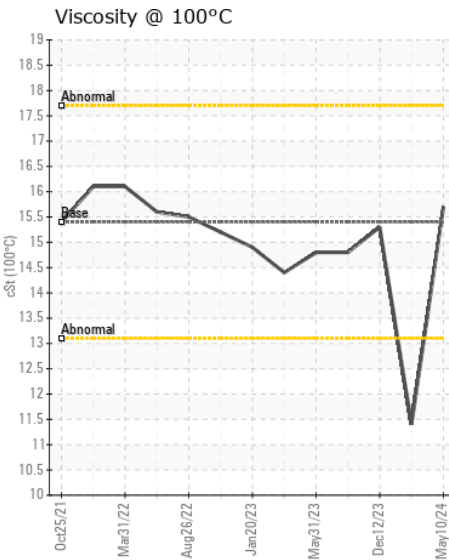
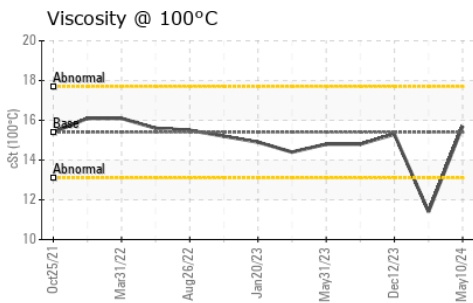
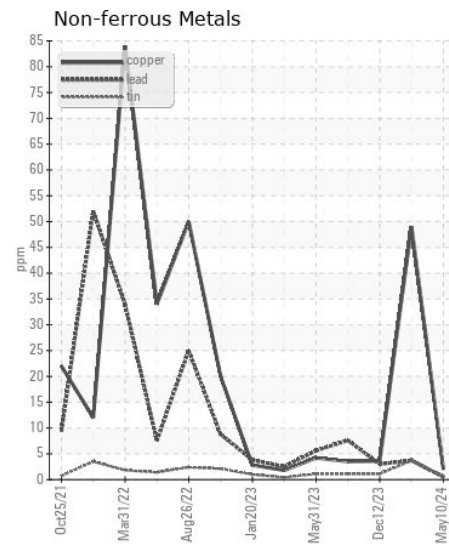
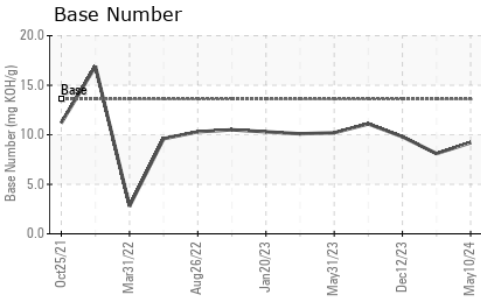
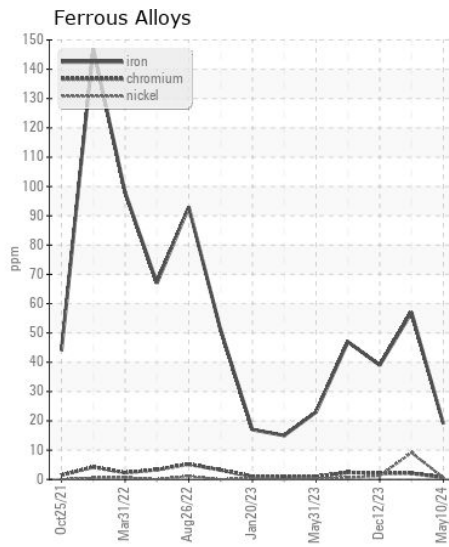
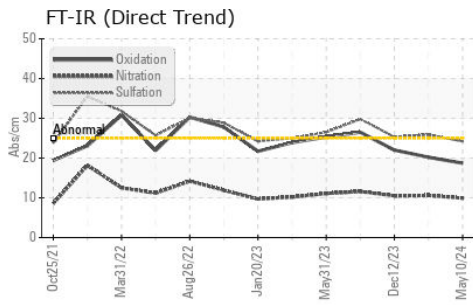
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	16	10	23
Potassium	ppm	ASTM D5185m	>20	9	4	11
Fuel		WC Method	>5	<1.0	0.3	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	1.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.9	10.6	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	25.9	25.3
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		29	11	39
Boron	ppm	ASTM D5185m		177	100	114
Barium	ppm	ASTM D5185m		<1	2	12
Molybdenum	ppm	ASTM D5185m		109	202	74
Manganese	ppm	ASTM D5185m		0	9	<1
Magnesium	ppm	ASTM D5185m		645	777	696
Calcium	ppm	ASTM D5185m		1929	1588	2227
Phosphorus	ppm	ASTM D5185m		1108	838	1111
Zinc	ppm	ASTM D5185m		1358	1066	1366
Sulfur	ppm	ASTM D5185m		3752	3196	3727
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.7	20.2	22.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	9.2	8.1	9.8
Visc @ 100°C	cSt	ASTM D445	15.4	15.7	▲ 11.4	15.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WE0006754
Lab Number : 06178498
Unique Number : 11029824
Test Package : CONST (Additional Tests: TBN)

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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)