



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area

**[W45851 SEG 5]**

Machine Id

**HITACHI 350LC 1FFDDR70HKF940804**

Component

**Diesel Engine**

Fluid

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

### RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0208540</b>	JR0166655	JR0147471
Sample Date		Client Info		<b>01 Jul 2024</b>	16 Mar 2023	14 Oct 2022
Machine Age	hrs	Client Info		<b>5818</b>	5445	5310
Oil Age	hrs	Client Info		<b>0</b>	0	366
Filter Age	hrs	Client Info		<b>0</b>	0	366
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	17	10
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>12</b>	8	5
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>0</b>	1	5
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

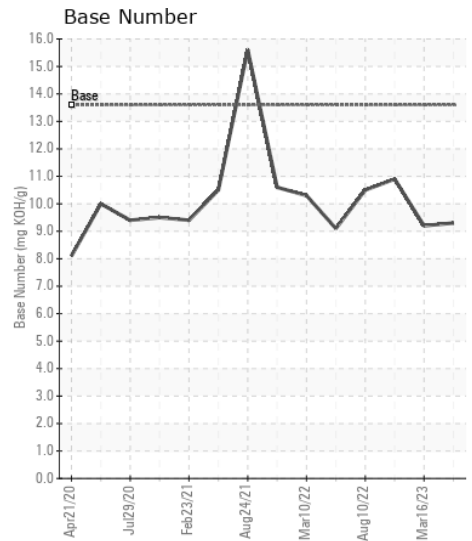
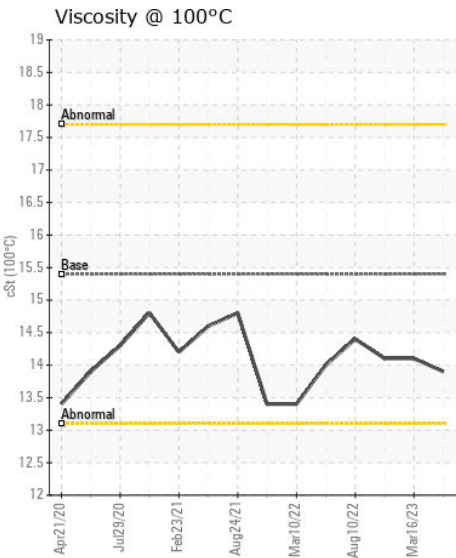
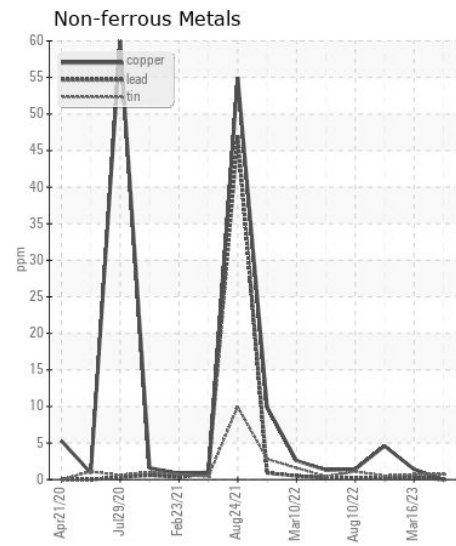
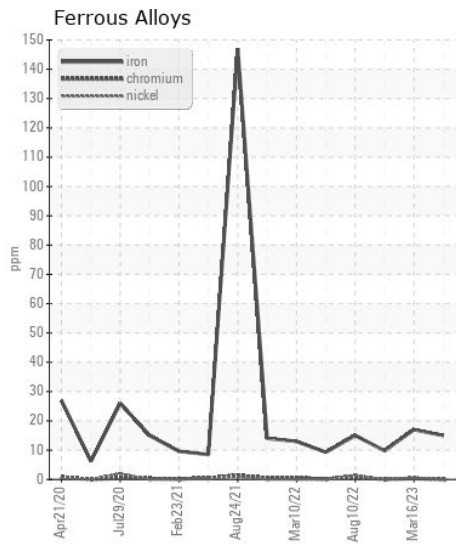
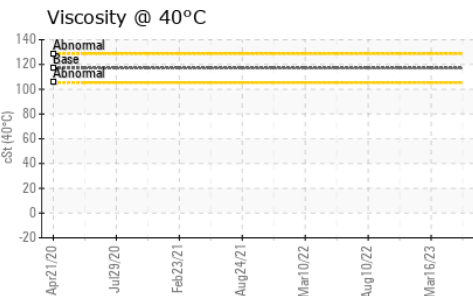
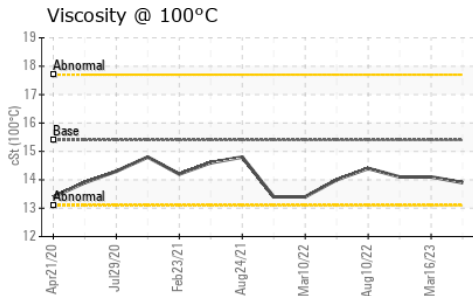
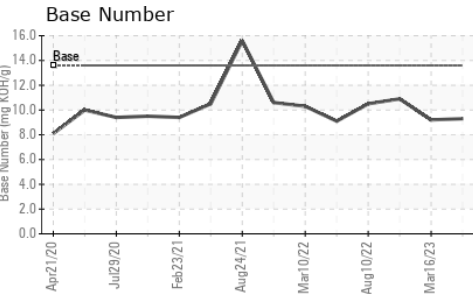
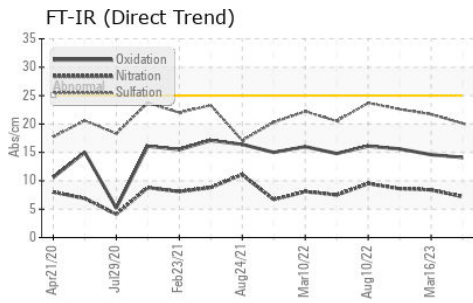
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.9	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	8.4	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	21.7	22.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>1</b>	0	0
Boron	ppm	ASTM D5185m		<b>233</b>	209	216
Barium	ppm	ASTM D5185m		<b>0</b>	3	0
Molybdenum	ppm	ASTM D5185m		<b>243</b>	250	246
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>853</b>	749	743
Calcium	ppm	ASTM D5185m		<b>1383</b>	1480	1465
Phosphorus	ppm	ASTM D5185m		<b>914</b>	884	879
Zinc	ppm	ASTM D5185m		<b>1080</b>	1083	1069
Sulfur	ppm	ASTM D5185m		<b>3515</b>	2787	3525
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.1</b>	14.6	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.3</b>	9.2	10.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	14.1	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0208540 **Received** : 03 Jul 2024  
**Lab Number** : 06227173 **Tested** : 05 Jul 2024  
**Unique Number** : 11110666 **Diagnosed** : 05 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN, KV40 )

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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