



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

Area

**[W68411]**

Machine Id

**HITACHI 300LC 1FFDDP7M840740**

Component

**Diesel Engine**

Fluid

**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: W68411 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0220331</b>	JR0205701	JR0192656
Sample Date		Client Info		<b>16 Jul 2024</b>	18 Mar 2024	09 Nov 2023
Machine Age	hrs	Client Info		<b>3505</b>	3032	2535
Oil Age	hrs	Client Info		<b>473</b>	497	1096
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	4	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	3	10
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<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.

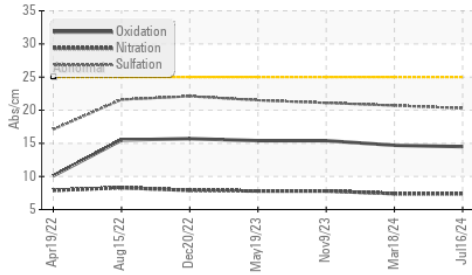
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	12
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	4
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	7.4	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	20.7	21.1
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

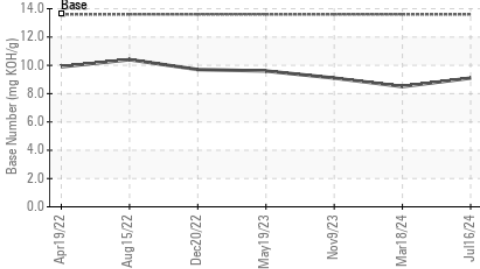
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>1</b>	<1	2
Boron	ppm	ASTM D5185m		<b>247</b>	240	335
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	8
Molybdenum	ppm	ASTM D5185m		<b>245</b>	245	336
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>805</b>	834	1080
Calcium	ppm	ASTM D5185m		<b>1448</b>	1451	1946
Phosphorus	ppm	ASTM D5185m		<b>892</b>	932	1198
Zinc	ppm	ASTM D5185m		<b>1008</b>	1098	1445
Sulfur	ppm	ASTM D5185m		<b>3193</b>	3519	4820
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.5</b>	14.7	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.1</b>	8.5	9.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.6</b>	13.6	13.5

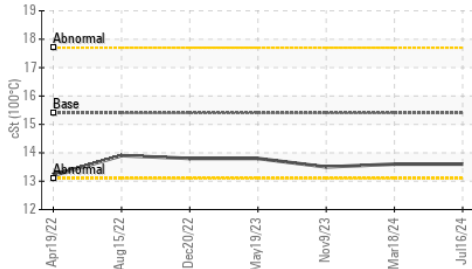
**FT-IR (Direct Trend)**



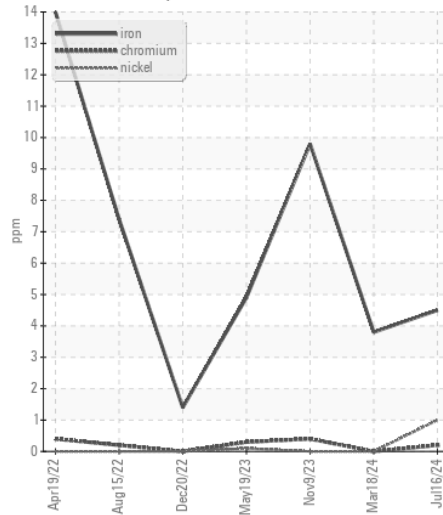
**Base Number**



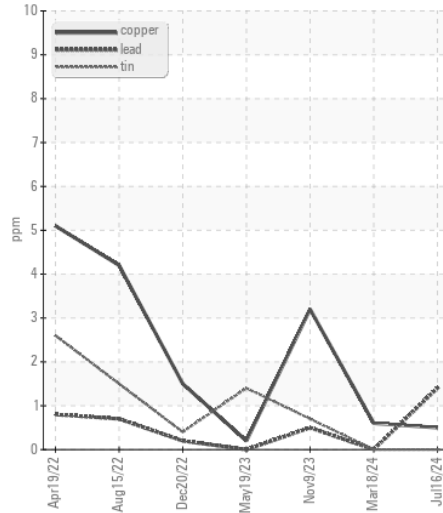
**Viscosity @ 100°C**



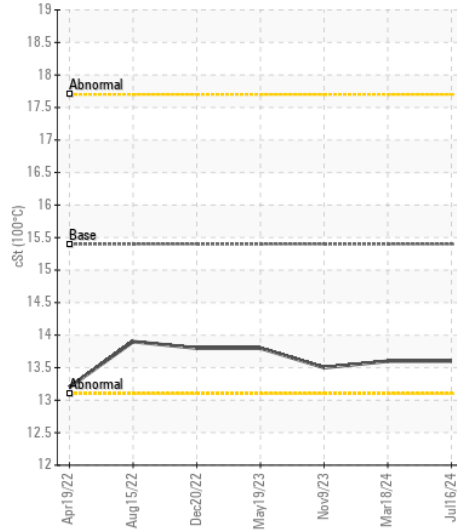
**Ferrous Alloys**



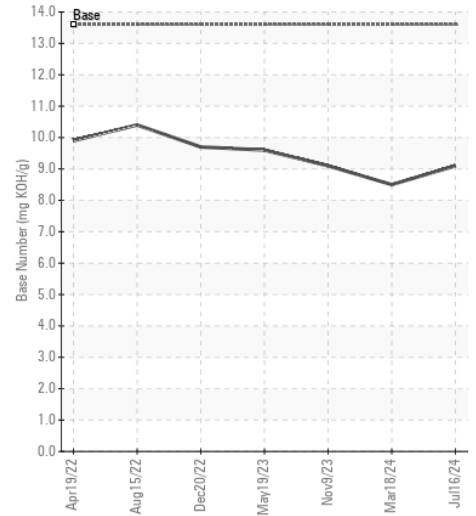
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0220331 **Received** : 18 Jul 2024  
**Lab Number** : 06239931 **Tested** : 18 Jul 2024  
**Unique Number** : 11128765 **Diagnosed** : 19 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**JRE - CHARLOTTE**  
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 F: (704)596-6198

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)