



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

Area  
**[W67860]**

Machine Id  
**HITACHI 300LC 1FFDDP70VKF840558**

Component  
**Diesel Engine**

Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (8 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: W67860 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0205734</b>	JR0203883	JR0178144
Sample Date		Client Info		<b>08 Jul 2024</b>	28 Feb 2024	18 Sep 2023
Machine Age	hrs	Client Info		<b>7032</b>	6947	6140
Oil Age	hrs	Client Info		<b>85</b>	807	4506
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>6</b>	11	5
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	2	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	4	5
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
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.

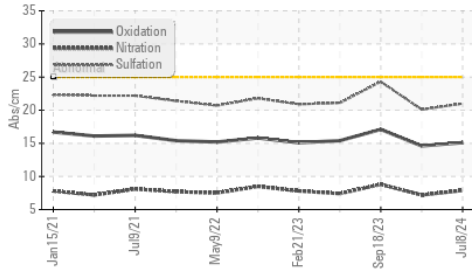
Silicon	ppm	ASTM D5185m	>25	<b>8</b>	7	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	7.2	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	20.1	24.3
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

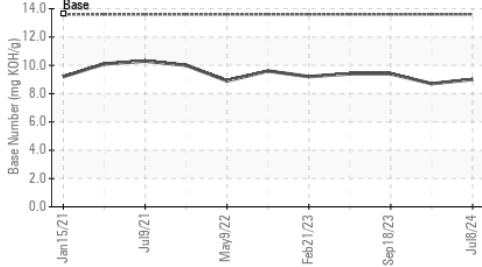
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>17</b>	3	3
Boron	ppm	ASTM D5185m		<b>258</b>	150	224
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>246</b>	172	259
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>794</b>	532	780
Calcium	ppm	ASTM D5185m		<b>1398</b>	1031	1467
Phosphorus	ppm	ASTM D5185m		<b>911</b>	867	889
Zinc	ppm	ASTM D5185m		<b>1097</b>	741	1068
Sulfur	ppm	ASTM D5185m		<b>3119</b>	2413	3227
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.1</b>	14.6	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.0</b>	8.7	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	13.8	13.7

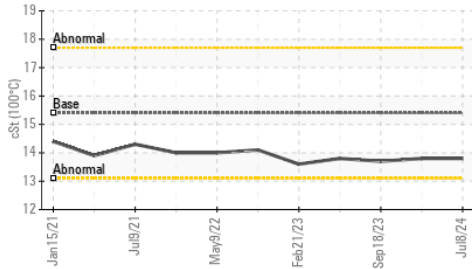
**FT-IR (Direct Trend)**



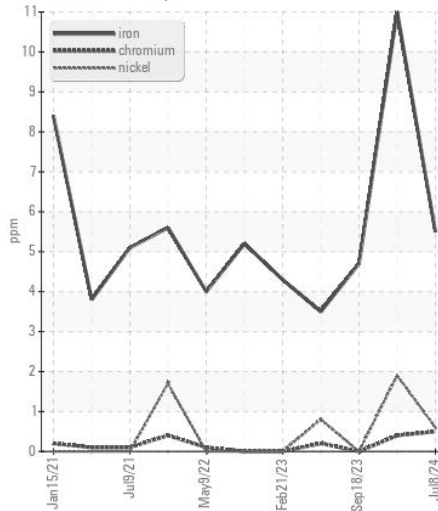
**Base Number**



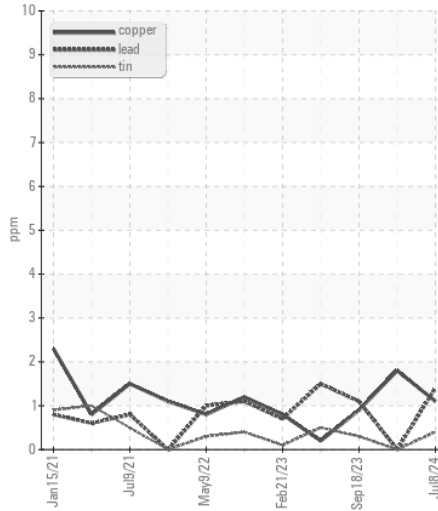
**Viscosity @ 100°C**



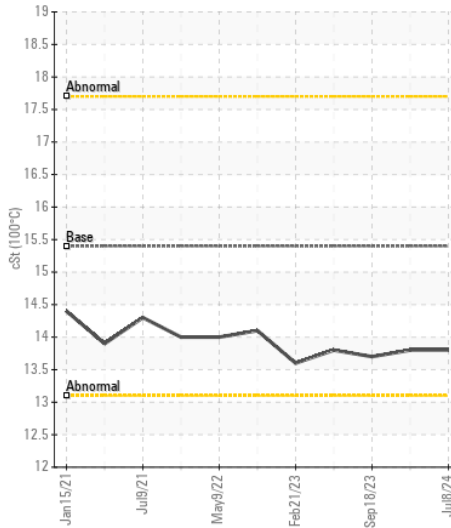
**Ferrous Alloys**



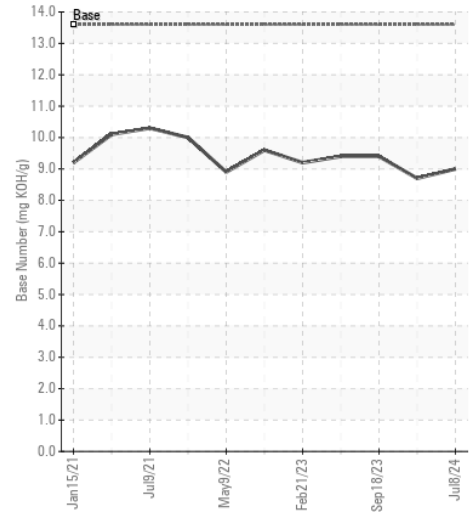
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : JR0205734

**Lab Number** : 06232060

**Unique Number** : 11115553

**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 10 Jul 2024

**Tested** : 10 Jul 2024

**Diagnosed** : 11 Jul 2024 - Don Baldridge

**JRE - CHARLOTTE**

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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)