



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



Machine Id  
**JOHN DEERE 550K 1T0550KKPJF335339**  
 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		<b>JR0218778</b>	JR0208029	JR0185265
Sample Date		Client Info		<b>21 Jun 2024</b>	11 Mar 2024	03 Oct 2023
Machine Age	hrs	Client Info		<b>4954</b>	4713	4441
Oil Age	hrs	Client Info		<b>241</b>	272	295
Filter Age	hrs	Client Info		<b>241</b>	272	295
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	>51	<b>7</b>	11	18
Chromium	ppm	ASTM D5185m	>11	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>5</b>	5	6
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	1	2
Copper	ppm	ASTM D5185m	>26	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<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.

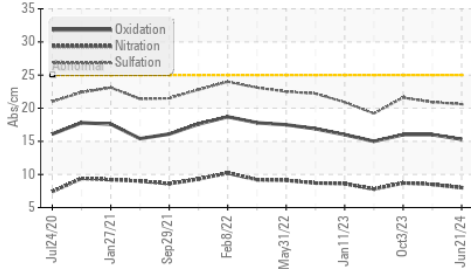
Silicon	ppm	ASTM D5185m	>22	<b>7</b>	9	12
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	2
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	8.5	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	20.9	21.6
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	>0.21	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

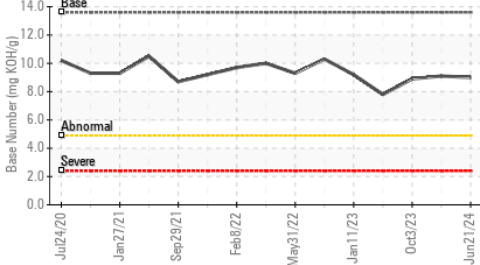
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	0	3
Boron	ppm	ASTM D5185m		<b>245</b>	258	310
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>241</b>	252	319
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>831</b>	783	1011
Calcium	ppm	ASTM D5185m		<b>1396</b>	1338	1704
Phosphorus	ppm	ASTM D5185m		<b>889</b>	856	1119
Zinc	ppm	ASTM D5185m		<b>1070</b>	1045	1341
Sulfur	ppm	ASTM D5185m		<b>3436</b>	3084	4020
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.3</b>	16.0	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.0</b>	9.1	8.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.4</b>	13.4	13.5

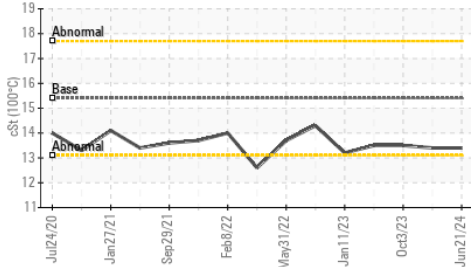
**FT-IR (Direct Trend)**



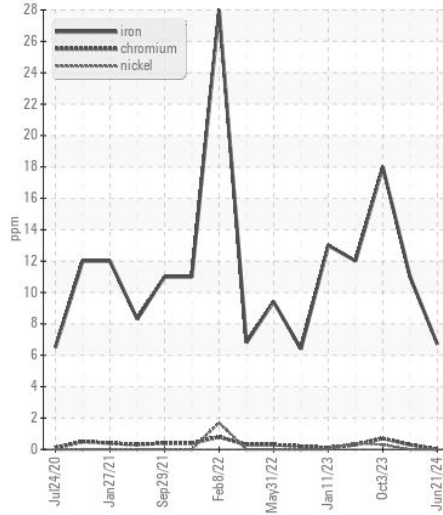
**Base Number**



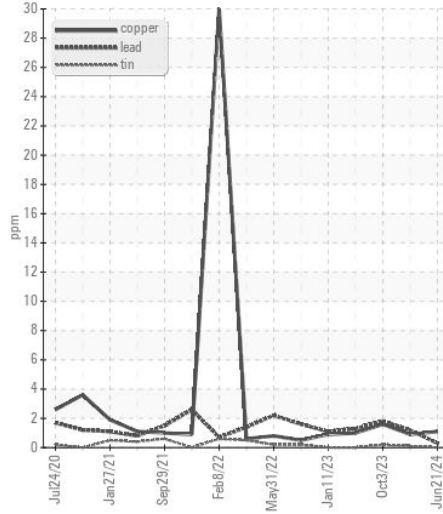
**Viscosity @ 100°C**



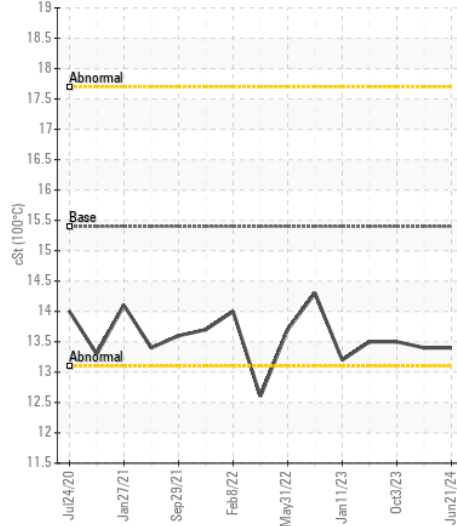
**Ferrous Alloys**



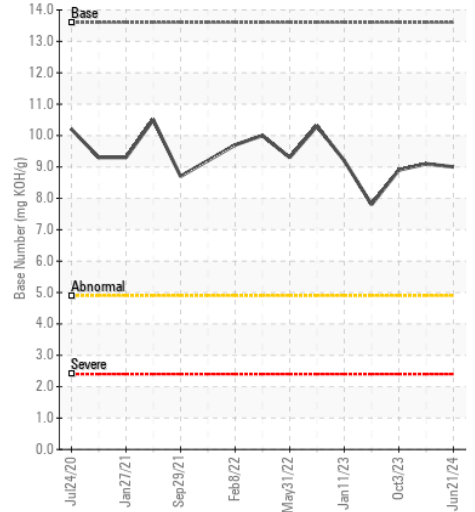
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0218778 **Received** : 26 Jun 2024  
**Lab Number** : 06220818 **Tested** : 27 Jun 2024  
**Unique Number** : 11099015 **Diagnosed** : 27 Jun 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**TENNOCA CONSTRUCTION**  
 PO BOX 2379  
 CANDLER, NC  
 US 28715  
 Contact: MARK ROSS  
 mark@tennoca.com  
 T: (828)665-8331  
 F:

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)