



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



Machine Id  
**JOHN DEERE 844J DW844JX613105**

Component  
**Diesel Engine**

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

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0197876</b>	JR0186461	JR0175503
Sample Date		Client Info		<b>16 Jan 2024</b>	08 Sep 2023	23 Jun 2023
Machine Age	hrs	Client Info		<b>34513</b>	34151	33622
Oil Age	hrs	Client Info		<b>362</b>	529	496
Filter Age	hrs	Client Info		<b>362</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

### WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>▲ 78</b>	43	29
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	<1	<1
Lead	ppm	ASTM D5185m	>26	<b>8</b>	1	1
Copper	ppm	ASTM D5185m	>26	<b>6</b>	3	2
Tin	ppm	ASTM D5185m	>4	<b>2</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	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.

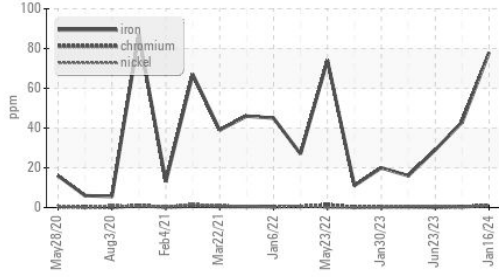
Silicon	ppm	ASTM D5185m	>22	<b>9</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	1
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.3</b>	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.4</b>	7.7	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.7</b>	19.7	20.7
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

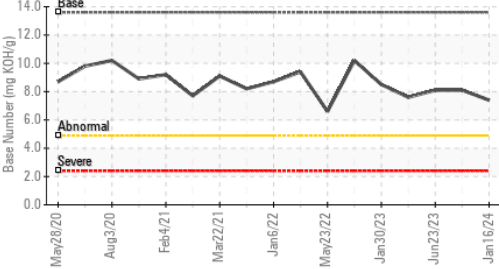
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	2	0
Boron	ppm	ASTM D5185m		<b>63</b>	79	82
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>99</b>	80	75
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>407</b>	363	396
Calcium	ppm	ASTM D5185m		<b>1995</b>	2092	2029
Phosphorus	ppm	ASTM D5185m		<b>916</b>	984	1114
Zinc	ppm	ASTM D5185m		<b>1251</b>	1251	1318
Sulfur	ppm	ASTM D5185m		<b>3226</b>	4214	3792
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.3</b>	13.5	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>7.4</b>	8.1	8.1
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	14.0	13.2

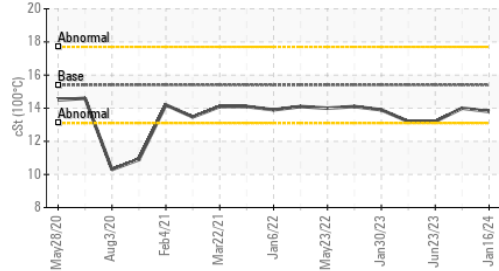
▲ Ferrous Alloys



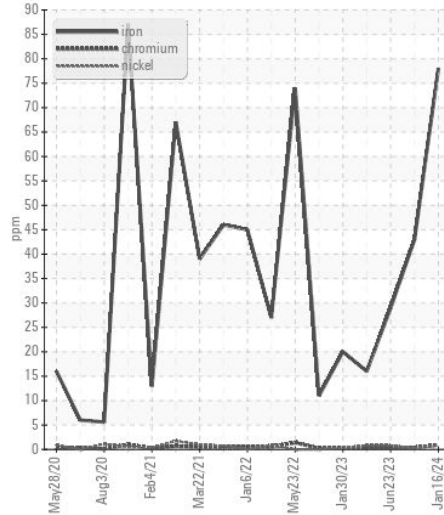
Base Number



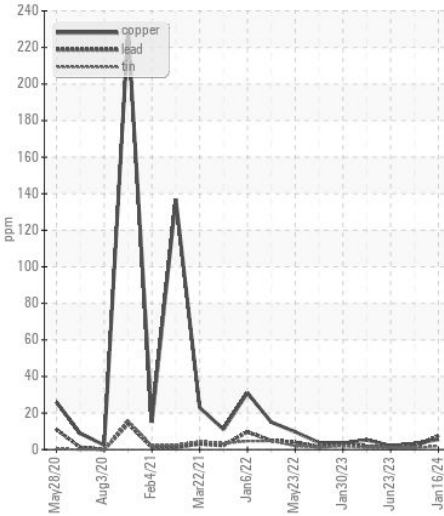
Viscosity @ 100°C



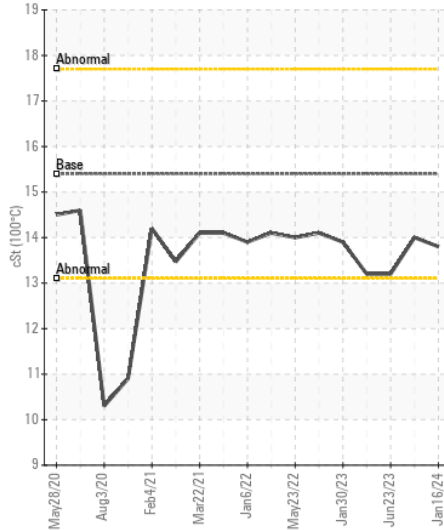
▲ Ferrous Alloys



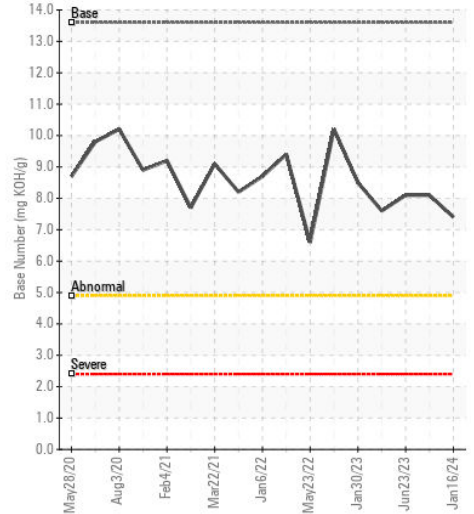
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0197876 **Received** : 17 Jan 2024  
**Lab Number** : 06062504 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833886 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**FUQUAY - MARTIN MARIETTA**  
 7400 BUCKHORN DUNCAN RD  
 HOLLY SPRINGS, NC  
 US 27549  
 Contact: DARIN HESS  
 darin.hess@martinmarietta.com

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)

T:  
F: