



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

Area  
**[16W16630]**

Machine Id  
**JOHN DEERE 853M 1T0853MXELL389635 - DOOR**

Component  
**Diesel Engine**

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

### RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. ( Customer Sample Comment: 16W16630 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0217357</b>	JR0217344	JR0173581
Sample Date		Client Info		<b>11 Jul 2024</b>	24 Jun 2024	16 Jun 2023
Machine Age	hrs	Client Info		<b>5878</b>	5812	4282
Oil Age	hrs	Client Info		<b>66</b>	912	545
Filter Age	hrs	Client Info		<b>66</b>	912	545
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>20</b>	▲ 79	34
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	6	4
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>6</b>	● 9	4
Lead	ppm	ASTM D5185m	>26	<b>2</b>	13	2
Copper	ppm	ASTM D5185m	>26	<b>11</b>	10	6
Tin	ppm	ASTM D5185m	>4	<b>0</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

Sodium and/or potassium levels remain high.

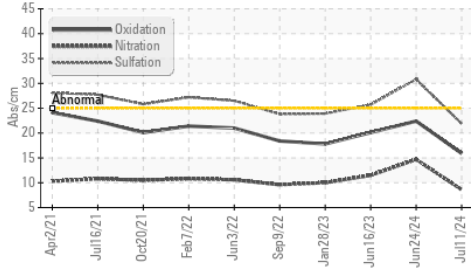
Silicon	ppm	ASTM D5185m	>22	<b>15</b>	▲ 40	16
Potassium	ppm	ASTM D5185m	>20	<b>▲ 85</b>	▲ 377	▲ 93
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	▲ 0.10	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	1.5	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	14.7	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	30.8	25.7
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

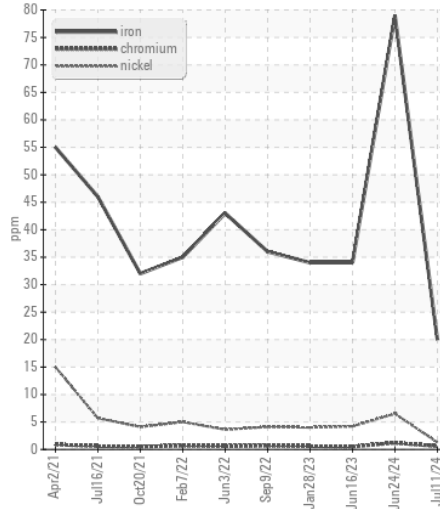
The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>31	<b>▲ 394</b>	▲ 1443	▲ 609
Boron	ppm	ASTM D5185m		<b>156</b>	8	12
Barium	ppm	ASTM D5185m		<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m		<b>266</b>	289	249
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>800</b>	841	768
Calcium	ppm	ASTM D5185m		<b>1456</b>	1556	1541
Phosphorus	ppm	ASTM D5185m		<b>983</b>	1246	806
Zinc	ppm	ASTM D5185m		<b>1085</b>	1197	1013
Sulfur	ppm	ASTM D5185m		<b>2774</b>	3103	3045
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.9</b>	22.4	20.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.5</b>	8.6	9.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	13.9	14.3

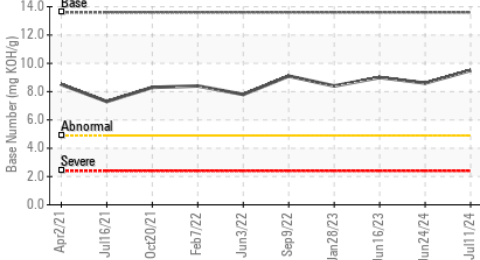
**FT-IR (Direct Trend)**



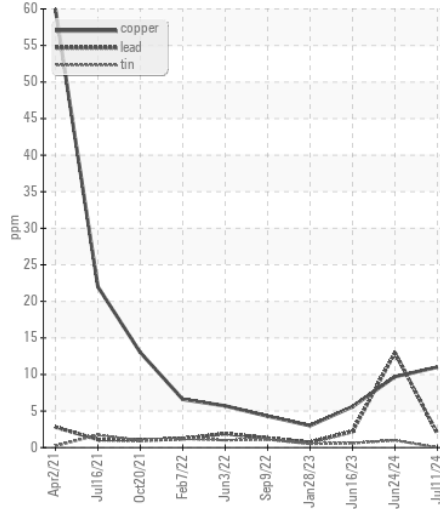
**Ferrous Alloys**



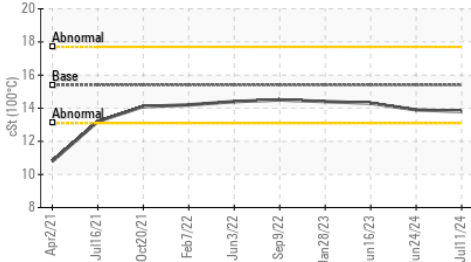
**Base Number**



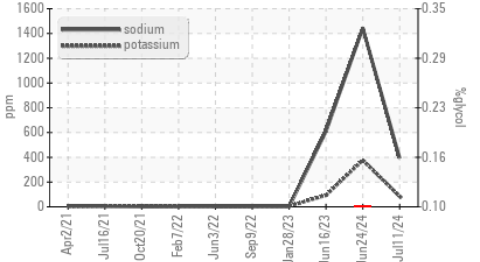
**Non-ferrous Metals**



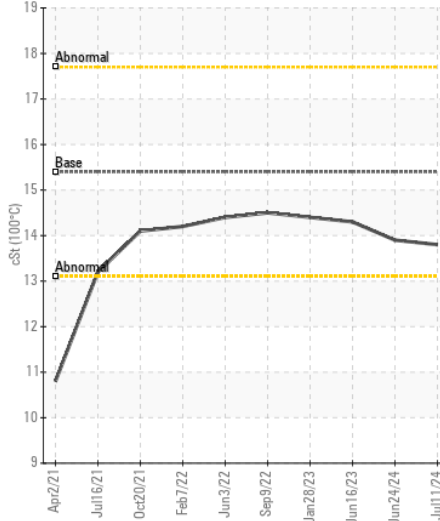
**Viscosity @ 100°C**



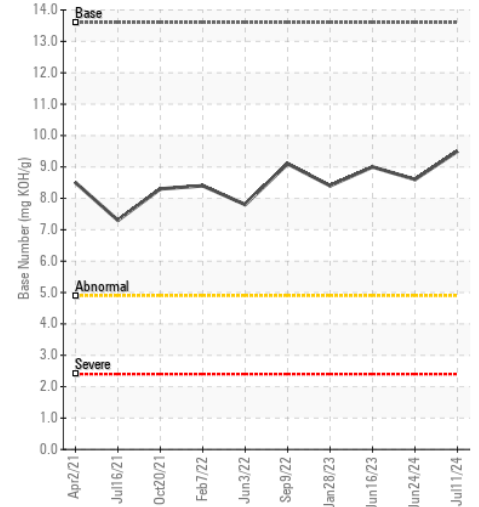
**Glycol Contamination**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0217357 **Received** : 12 Jul 2024  
**Lab Number** : 06234632 **Tested** : 17 Jul 2024  
**Unique Number** : 11123466 **Diagnosed** : 17 Jul 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: TBN )

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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