



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



Machine Id  
**JOHN DEERE 644K 1DW644KZCFF666910**

Component  
**Diesel Engine**

Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (29 QTS)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0195918</b>	JR0184006	JR0166371
Sample Date		Client Info		<b>12 Jan 2024</b>	06 Sep 2023	30 Mar 2023
Machine Age	hrs	Client Info		<b>10437</b>	10096	9779
Oil Age	hrs	Client Info		<b>341</b>	0	508
Filter Age	hrs	Client Info		<b>0</b>	0	508
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>15</b>	18	41
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>4</b>	4	6
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	4	4
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>26	<b>0</b>	0	<1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

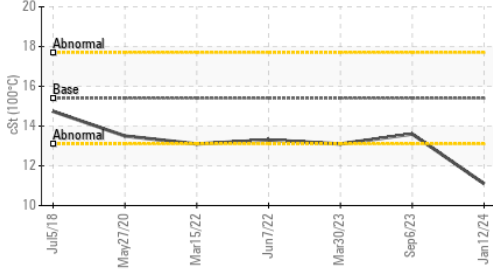
Silicon	ppm	ASTM D5185m	>22	<b>6</b>	7	8
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	5
Fuel	%	ASTM D3524	>2.1	<b>0.1</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	7.6	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	20.4	22.0
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

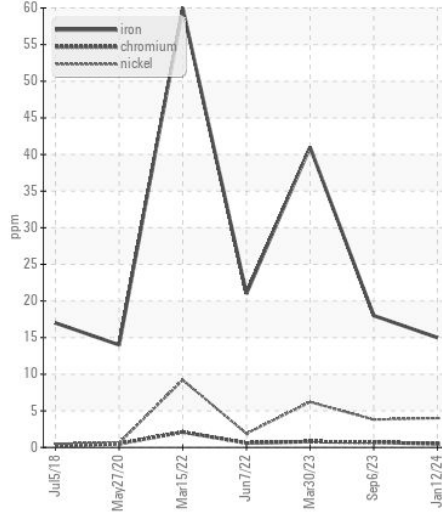
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>31	<b>53</b>	27	62
Boron	ppm	ASTM D5185m		<b>135</b>	240	175
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>138</b>	251	240
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m		<b>489</b>	846	829
Calcium	ppm	ASTM D5185m		<b>2395</b>	1492	1595
Phosphorus	ppm	ASTM D5185m		<b>1043</b>	910	887
Zinc	ppm	ASTM D5185m		<b>1197</b>	1106	1116
Sulfur	ppm	ASTM D5185m		<b>3384</b>	3726	3458
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.3</b>	14.8	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.3</b>	8.9	8.6
Visc @ 100°C	cSt	ASTM D445	15.4	<b>▲ 11.1</b>	13.6	13.1

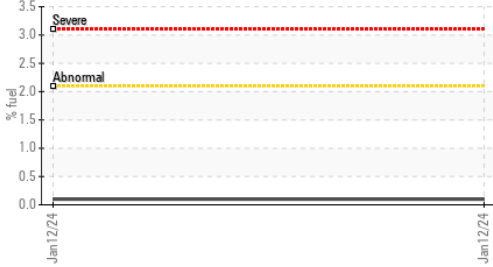
▲ Viscosity @ 100°C



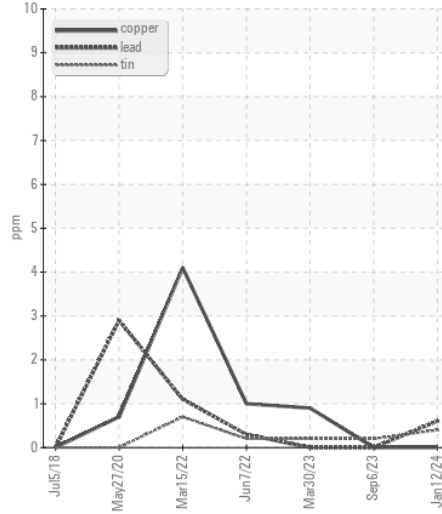
Ferrous Alloys



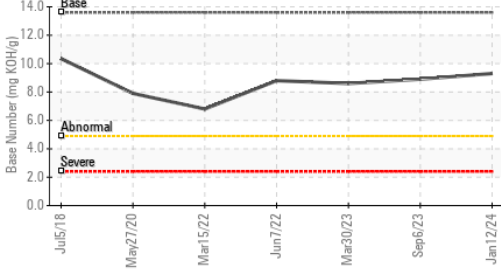
Fuel Dilution



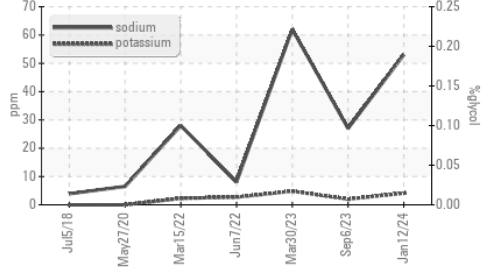
Non-ferrous Metals



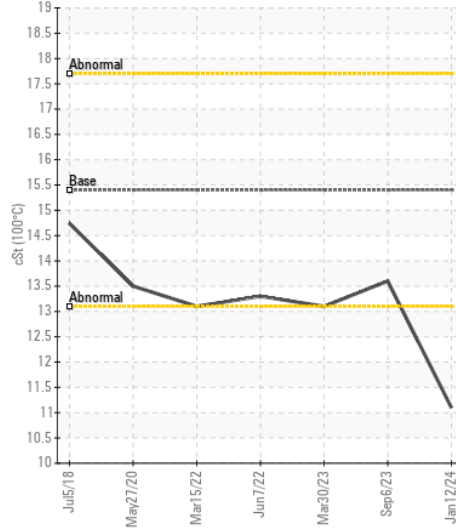
Base Number



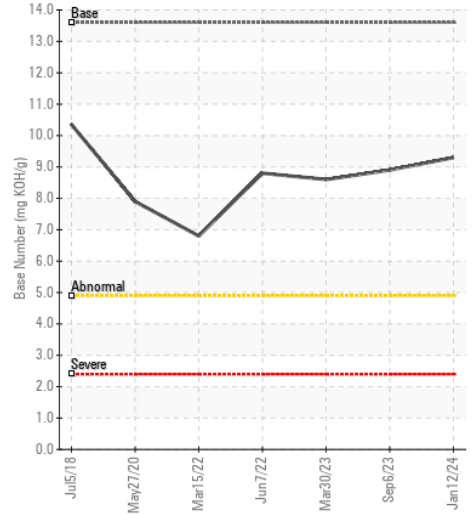
Glycol Contamination



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0195918 **Received** : 16 Jan 2024  
**Lab Number** : 06060850 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10832232 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: FuelDilution, Glycol, PercentFuel, TBN )

**OSCAR RENDA CONTRACTING**  
 5222 BENSON LANE  
 ROANOKE, TX  
 US 76262  
 Contact: TROY COREY  
 tcorey@oscarrenda.com  
 T: (817)491-2703  
 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)