



# OIL ANALYSIS REPORT

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

Area  
**Rockydale Quarries [W10262]**  
 Machine Id  
**JOHN DEERE 944K 1DW944KXAKF696689**  
 Component  
**Diesel Engine**  
 Fluid  
**{not provided} (--- QTS)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0170467</b>	JR0170646	JR0170526
Sample Date		Client Info		<b>18 Sep 2023</b>	27 Jul 2023	12 Jun 2023
Machine Age	hrs	Client Info		<b>7319</b>	7035	6792
Oil Age	hrs	Client Info		<b>6792</b>	6792	2874
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>30</b>	18	18
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
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>4</b>	5	1
Lead	ppm	ASTM D5185m	>26	<b>11</b>	6	5
Copper	ppm	ASTM D5185m	>26	<b>▲ 380</b>	31	36
Tin	ppm	ASTM D5185m	>4	<b>6</b>	4	5
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

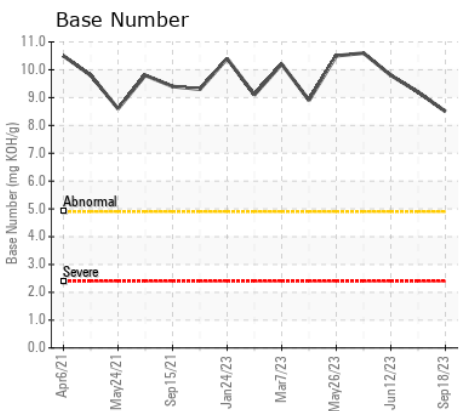
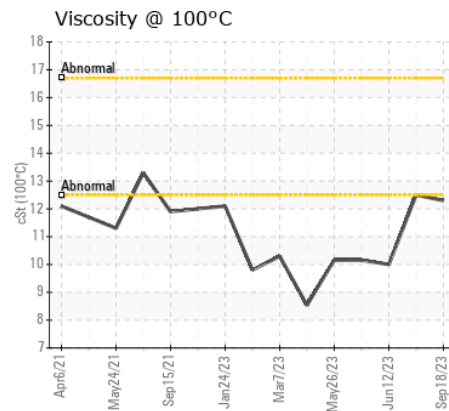
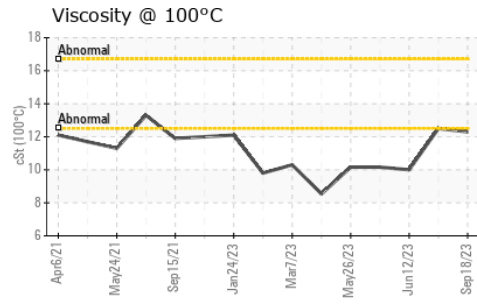
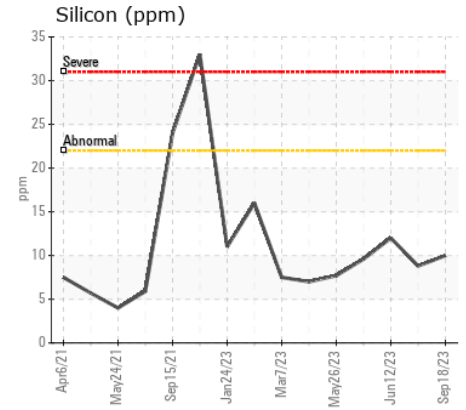
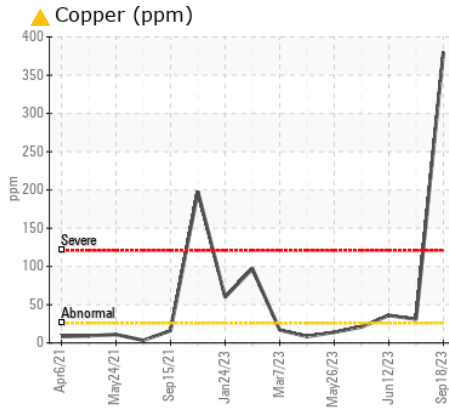
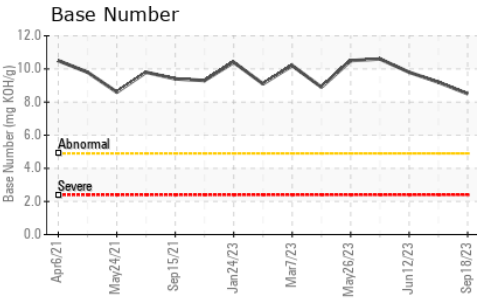
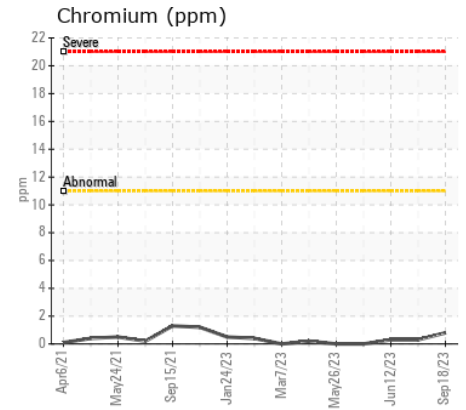
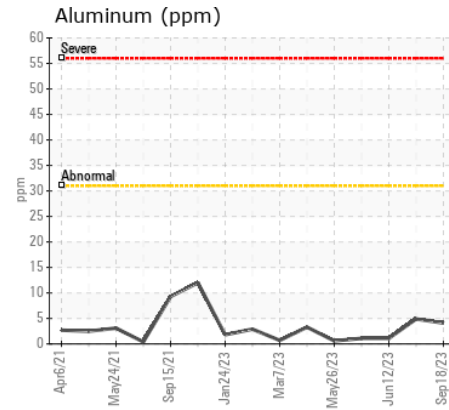
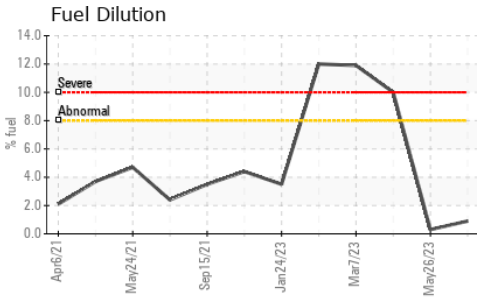
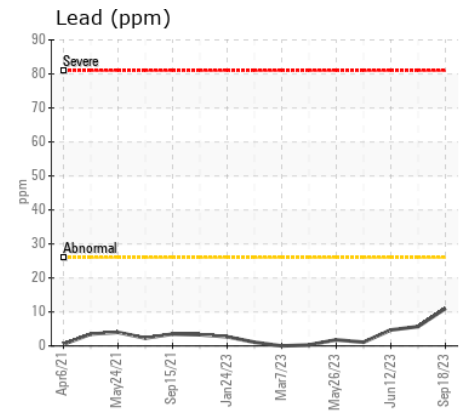
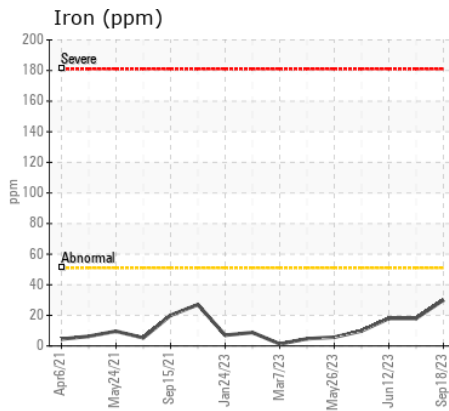
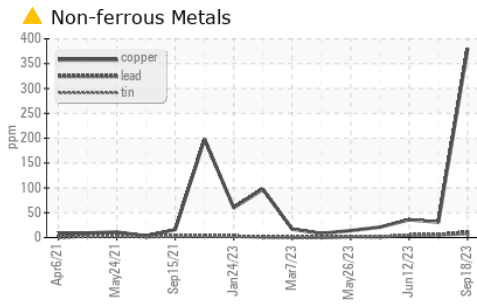
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>10</b>	9	12
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	2	2
Fuel	%	ASTM D3524	>8.0	<b>0.9</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</b>	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	8.3	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.2</b>	20.7	20.4
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	<b>6</b>	2	4
Boron	ppm	ASTM D5185m		<b>121</b>	232	276
Barium	ppm	ASTM D5185m		<b>0</b>	2	1
Molybdenum	ppm	ASTM D5185m		<b>236</b>	255	249
Manganese	ppm	ASTM D5185m		<b>2</b>	2	5
Magnesium	ppm	ASTM D5185m		<b>831</b>	788	736
Calcium	ppm	ASTM D5185m		<b>1490</b>	1448	1349
Phosphorus	ppm	ASTM D5185m		<b>847</b>	891	872
Zinc	ppm	ASTM D5185m		<b>1066</b>	1063	990
Sulfur	ppm	ASTM D5185m		<b>3268</b>	3107	2954
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.0</b>	14.6	14.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.5</b>	9.2	9.8
Visc @ 100°C	cSt	ASTM D445		<b>12.3</b>	12.5	10.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0170467  
**Lab Number** : 05959641  
**Unique Number** : 10660854  
**Test Package** : MOBCE ( Additional Tests: FuelDilution, PercentFuel, TBN )

**JRE - SALEM**  
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Received : 25 Sep 2023  
 Tested : 26 Sep 2023  
 Diagnosed : 26 Sep 2023 - Don Baldrige  
 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)