



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



Machine Id  
**JOHN DEERE 644H C053487**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 40 (26 GAL)**

### 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>JR0194933</b>	JR0151627	JR0120578
Sample Date		Client Info		<b>26 Feb 2024</b>	13 Jan 2023	27 Jun 2022
Machine Age	hrs	Client Info		<b>14028</b>	13939	13392
Oil Age	hrs	Client Info		<b>0</b>	0	250
Filter Age	hrs	Client Info		<b>0</b>	0	250
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.

Iron	ppm	ASTM D5185m	>51	<b>▲ 170</b>	20	29
Chromium	ppm	ASTM D5185m	>11	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>31	<b>6</b>	2	3
Lead	ppm	ASTM D5185m	>26	<b>3</b>	<1	1
Copper	ppm	ASTM D5185m	>26	<b>2</b>	<1	<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

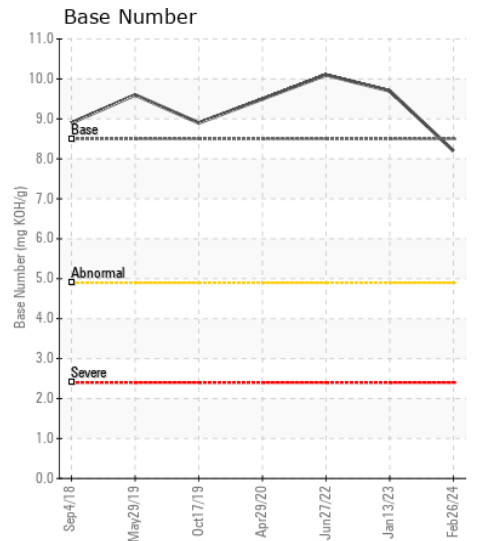
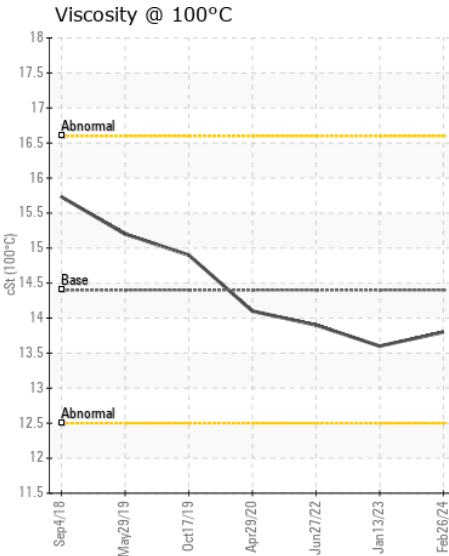
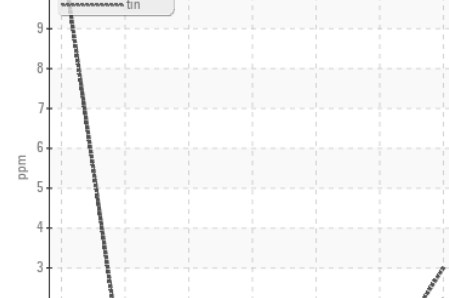
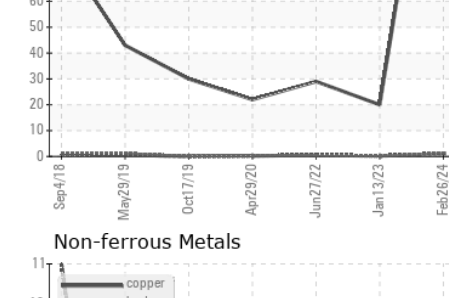
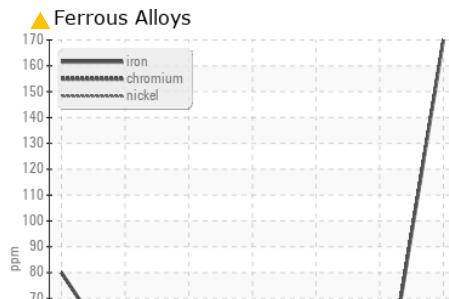
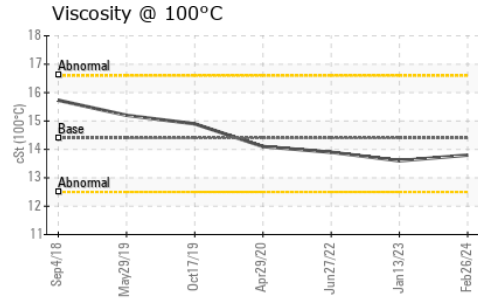
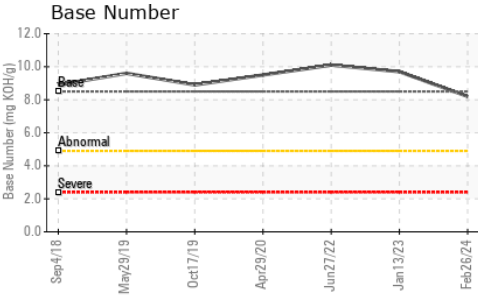
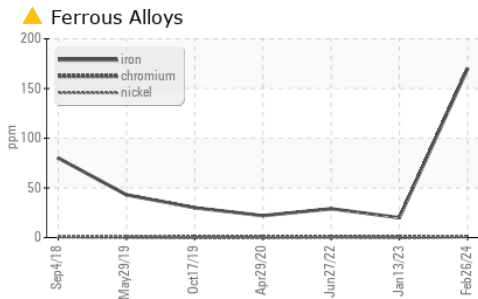
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>18</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
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>	0.8	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.7</b>	10.1	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>27.2</b>	22.7	24.7
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>216	<b>2</b>	2	1
Boron	ppm	ASTM D5185m	250	<b>168</b>	197	200
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>206</b>	222	225
Manganese	ppm	ASTM D5185m		<b>2</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>833</b>	847	847
Calcium	ppm	ASTM D5185m	3000	<b>1512</b>	1428	1480
Phosphorus	ppm	ASTM D5185m	1150	<b>1026</b>	946	926
Zinc	ppm	ASTM D5185m	1350	<b>1210</b>	1095	1128
Sulfur	ppm	ASTM D5185m	4250	<b>2977</b>	3627	3649
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.7</b>	18.7	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.2</b>	9.7	10.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	13.6	13.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0194933 **Received** : 01 Mar 2024  
**Lab Number** : 06105898 **Tested** : 06 Mar 2024  
**Unique Number** : 10909395 **Diagnosed** : 06 Mar 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: TBN )

**W&L CONSTRUCTION AND PAVING**  
 DRAWER 927  
 CHILHOWIE, VA  
 US 24319  
 Contact: TRAVIS LEWIS

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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F: