

## Machine Id JOHN DEERE 624 P 1DW624PACPLX19397 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.

V	/F	Δ	R
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The copper level has decreased, but is still 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.

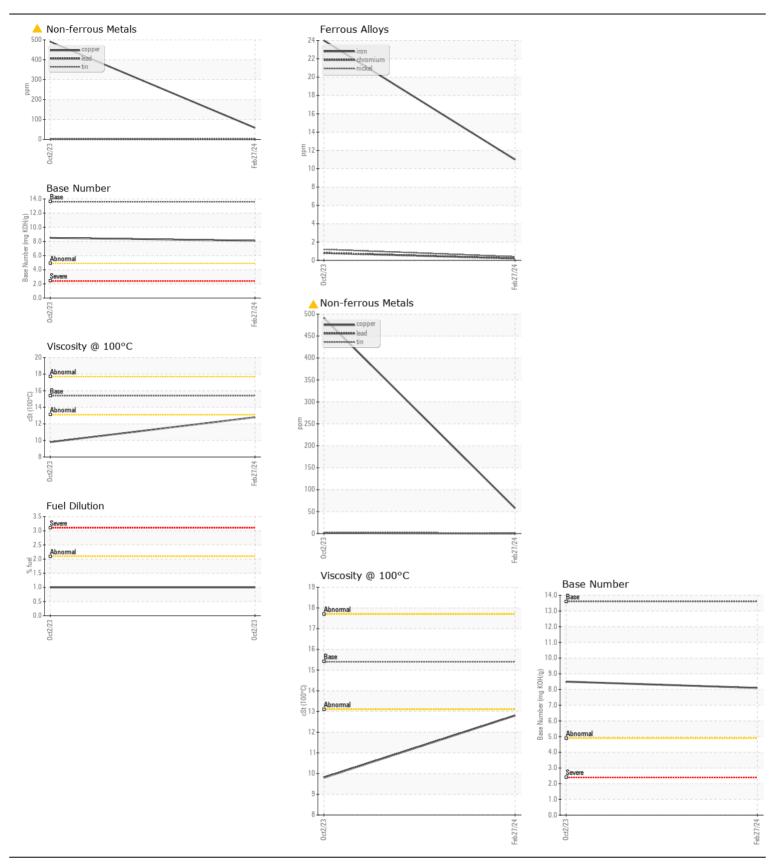
## CONTAMINATION

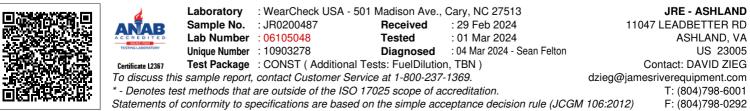
There is no indication of any contamination in the oil.

	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		JR0200487	JR0179320	
	Sample Date		Client Info		27 Feb 2024	02 Oct 2023	
	Machine Age	hrs	Client Info		955	456	
	Oil Age	hrs	Client Info		0	456	
	Filter Age	hrs	Client Info		0	456	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				ABNORMAL	ABNORMAL	
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	Iron	ppm	ASTM D5185m	>51	11	24	
	Chromium	ppm	ASTM D5185m	>11	<1	<1	
	Nickel	ppm	ASTM D5185m	>5	<1	1	
	Titanium	ppm	ASTM D5185m		0	<1	
	Silver	ppm	ASTM D5185m	>3	0	<1	
	Aluminum	ppm	ASTM D5185m	>31	4	6	
	Lead	ppm	ASTM D5185m	>26	<1	1	
	Copper	ppm	ASTM D5185m	>26	<b>5</b> 8	<b>4</b> 91	
	Tin	ppm	ASTM D5185m	>4	1	3	
	Vanadium	ppm	ASTM D5185m		0	<1	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
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	Silicon	ppm	ASTM D5185m	>22	7	12	
	Potassium	ppm	ASTM D5185m	>20	1	2	
	Fuel	%	ASTM D3524	>2.1	<1.0	1.0	
	Water		WC Method	>0.21	NEG	NEG	
	Glycol	<u>0</u> (	WC Method	0	NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.2	0.2	
	Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.3	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	21.0	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE NORML	NONE	
	Appearance Odor	scalar scalar	*Visual	NORML NORML	-	NORML	
	Emulsified Water		*Visual		NORML	NORML	
		scalar	*Visual	>0.21	NEG	NEG	
	Sodium	ppm	ASTM D5185m	>31	3	4	
e	Boron	ppm	ASTM D5185m		217	216	
	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		235	252	
	Manganese	ppm	ASTM D5185m		1	6	
	Magnesium	ppm	ASTM D5185m		782	884	
	Calcium	ppm	ASTM D5185m		1307	1430	
	Phosphorus	ppm	ASTM D5185m		905	972	
	Zinc	ppm	ASTM D5185m		1072	1153	
	Sulfur	ppm	ASTM D5185m		2942	3174	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	15.9	
	Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.1	8.5	
	Visc @ 100°C	cSt	ASTM D445	15.4	12.8	9.8	
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## 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.





Contact/Location: DAVID ZIEG - JAMASH

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