

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

JOHN DEERE 624L 624L UNIT 1

Diesel Engine

DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

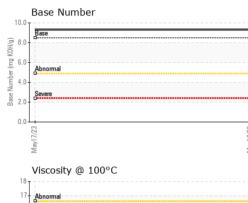
				May2023		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PE0002494		
Sample Date		Client Info		17 May 2023		
Machine Age	hrs	Client Info		5138		
Oil Age	hrs	Client Info		205		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	7		
Chromium	ppm	ASTM D5185m	>11	<1		
Nickel	ppm	ASTM D5185m	>5	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>31	0		
Lead	ppm	ASTM D5185m	>26	0		
Copper	ppm	ASTM D5185m	>26	4		
Tin	ppm	ASTM D5185m	>4	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250	current 1	history1	history2
	ppm ppm					history2
Boron Barium		ASTM D5185m	250	1		
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	250 10	1 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	1 0 54		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	1 0 54 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	1 0 54 <1 901		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	1 0 54 <1 901 1171		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	1 0 54 <1 901 1171 1025	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	1 0 54 <1 901 1171 1025 1264		
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	1 0 54 <1 901 1171 1025 1264 3818		
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	1 0 54 <1 901 1171 1025 1264 3818 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	250 10 100 450 3000 1150 1350 4250 limit/base >22	1 0 54 <1 901 1171 1025 1264 3818 current 4	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >216	1 0 54 <1 901 1171 1025 1264 3818 <u>current</u> 4 <1	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >22 >216 >20	1 0 54 <1 901 1171 1025 1264 3818 current 4 <1 <1	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >22 >216 >20 imit/base	1 0 54 <1 901 1171 1025 1264 3818 current 4 <1 <1 <1 current	 history1 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Imit/base >22 >216 >20 Imit/base >3	1 0 54 <1 901 1171 1025 1264 3818 <i>current</i> 4 <1 <1 <1 <i>current</i>	 history1 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Iimit/base >22 >216 >20 Iimit/base >3 >20	1 0 54 <1 901 1171 1025 1264 3818 <i>current</i> 4 <1 <1 <1 <i>current</i> 0.5 5.9	history1 history1	history2 history2 history2
Boron Barium Anganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADAT	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >22 >216 >216 >20 imit/base >3 >20 >30	1 0 54 <1 901 1171 1025 1264 3818 <u>current</u> 4 <1 <1 <1 current 0.5 5.9 19.9	 history1 history1 history1	
Boron Barium Any Anganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADAT Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	250 10 100 450 3000 1150 1350 4250 i mit/base >22 >216 >20 >20 i mit/base >3 >20 >30	1 0 54 <1 901 1171 1025 1264 3818 <i>current</i> 4 <1 <1 <1 <i>current</i> 0.5 5.9 19.9 <i>current</i>	 history1 history1 history1	



16 (0.001) 14 Base

13 Abnormal 12. 11 May17/23

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	VISUAL		method				history2
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
202		scalar	*Visual	NORML	NORML		
Maul 7/73	Odor	scalar	*Visual	NORML	NORML		
_	Emulsified Water	scalar	*Visual	>0.21	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPER		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	14.4	13.7		
	GRAPHS	001	AGTIN D443	17.7	10.1		
	Ferrous Alloys						
	iron						
	8 - nickel						
	6						
	m dd						
	4						
	2						
	0 ++	*******	**********				
	///			1			
	An an			avl			
	May17/23			May17/23			
	Non-ferrous Meta	als		May1			
	Non-ferrous Meta	ils		Mayl			
	Non-ferrous Meta	ils		May1			
	Non-ferrous Meta	ıls		May1			
	Non-ferrous Meta	ıls		Mayi			
	Non-ferrous Meta	ıls		Mayi			
	Non-ferrous Meta	ıls		Mayi			
	Non-ferrous Meta	ıls		May			
	Non-ferrous Meta	ıls		May			
	Non-ferrous Meta	ıls		1723			
	Non-ferrous Meta	ıls		May17/23			
	Non-ferrous Meta			1723	Base Number		
	Non-ferrous Meta			1723	Base Number		
	Non-ferrous Meta			EZ/LI/NeW 10.	Base		
	Non-ferrous Meta			CZ/LI/keW 10.	Base		
	Non-ferrous Meta			CZ/LI/keW 10.	Base		
	Non-ferrous Meta			CZ/LI/keW 10.	Abnormal		
	Non-ferrous Meta			CZ/LI/keW 10.	Base Abnomal		
	Non-ferrous Meta			10. (0)HOX KOM 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	Abnormal		
	Non-ferrous Meta			CZ/LI/keW 10.	Abnormal		
	Non-ferrous Meta			EZ/L1/AeW (0/HOX 0m) are query 4. 2. 0.	Abnormal		
	Non-ferrous Meta			10. (b/HOX Bu) as a grant of the set of the	Abnormal		
	Non-ferrous Meta			EZ/LL/AEW (0,HOX Bul) aquiny segg 2,	Base Abnormal		
Laboratory	Non-ferrous Meta	C	son Ave. Ca	EZ/L1/keW (6/HCX) Bull Jaquinky aseg 2. 52/L1/keW	Abnormal Severe CZ/LI ^J ew	MORNING	STAR DAI
Laboratory Sample No.	Non-ferrous Meta	C		EZ/LI/AEW EZ/LI/AEW EZ/LI/AEW 10. (0)HOX 6. 4. EZ/LI/AEW 10. 10. 10. 10. 10. 10. 10. 10.	Abnormal Severe CZ/LI ^J ew	MORNING	
Laboratory Sample No. Lab Number	Non-ferrous Meta	C 501 Madia Received Diagnose	d : 24 ed : 25	EZ/LI/AEW EZ/LI/AEW 10. (0)HOX Bui Jaquer 10. 10. 10. 10. 10. 10. 10. 10.	Abnormal Severe CZ/LI ^J ew	MORNING	801 FM 6
Sample No. Lab Number Unique Numbe	Non-ferrous Meta	501 Madia Received Diagnost	d : 24 ed : 25 tician : Dor	EZ/LI/AEW 10. (0)HOX 6. (0)HOX 6. (0)HOX 6. (0)HOX 6. (0) (0)HOX 6. (0) (0) (0) (0) (0) (0) (0) (0)	Bese Abnormal Severe		G STAR DAIP 801 FM 6 DALHART, ⁻ US 790
Sample No. Lab Number Unique Numbe Test Package	Non-ferrous Meta	501 Madia Received Diagnost Diagnost	d : 24 I ed : 25 I tician : Dor T-IR, ICP, K	EZ/LI/New EZ/LI/New 10. (0)HOX Bui Jaqueny ese 2. 0. Try, NC 27511 May 2023 May 2023 Ma	Bese Abnormal Severe	Contact: J	801 FM 6 DALHART,