

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

JOHN DEERE 624P 1DW624PAPNLZ13511

Diesel Engine

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

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.

Machine Age hrs Client Info 2368 1125 884 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info 0 0 0 0 Sample Status Imit Info NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Water WC Method >0.21 NEG NEG NEG WeAR METALS method imit/base current history1 history2 Iron ppm ASTM 05185 >51 8 9 17 Ohromium ppm ASTM 05185 >50 0 10 0 Nickel ppm ASTM 05185 >51 8 9 17 Ohromium ppm ASTM 05185 >50 0 1 0 Nickel ppm ASTM 05185 >31 3 4 2 Lead ppm ASTM 05185 >26 <1 0 0 Auminum ppm ASTM 05185 >26 <1 1 0 Vanadium ppm ASTM 05185 >26 <1 1	iu (Q13)		AUGZUZ	2 0802022	D862023 W	ay2024	
Sample Date Client Info 28 May 2024 15 Dec 2023 16 Dec 2022 Machine Age hrs Client Info 2366 1125 884 Oil Age hrs Client Info 0 0 0 Oil Changed Client Info Ohrmade Changed NCRMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.21 NEG NEG NEG Chromium ppm ASTM D51555 1 8 9 17 Chromium ppm ASTM D51555 51 8 9 17 Silver ppm ASTM D51555 21 3 4 2 Machinum ppm ASTM D51555 24 1 21 0 <	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 28 May 2024 15 Dec 2023 16 Dec 2022 Machine Age hrs Client Info 2368 1125 884 Oil Age hrs Client Info 0 0 0 0 Sample Status Inst Client Info Changed NORMAL NORMAL NORMAL CONTAMINATION method Imit/base current History1 History2 Water WC Method >0.21 NEG NEG NEG WEAR METALS method imit/base current History1 History2 Iron ppm ASTM D5165m >11 <1	Sample Number		Client Info		JR0211410	JR0180547	JR0157492
Machine Age hrs Client Info 2368 1125 884 Oil Aga hrs Client Info 0 0 0 Oil Changed Client Info 0 0 0 0 Sample Status Image Client Info 0 0 0 0 CONTAMINATION Wethod Solution NORMAL NORMAL NORMAL NORMAL CONTAMINATION Wethod Solution Solution NEG NEG NEG Water WC Method Solution NEG NEG NEG NEG WEAR METALS method Imit/base current history1 History2 Iron ppm ASTM 05185m S51 8 9 17 Chromium ppm ASTM 05185m S5 0 <1	Sample Date		Client Info		28 May 2024	15 Dec 2023	16 Dec 2022
Dil Changed Sample Status Client Info Changed NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Water WC Method >0.21 NEG NEG NEG WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >51 8 9 17 Chromium ppm ASTM D5185m >5 0 <1	Machine Age	hrs	Client Info			1125	884
Dil Changed Sample StatusClient InfoChanged NORMALChanged NORMALChanged NORMALChanged NORMALChanged NORMALChanged NORMALChanged NORMALChanged NORMALN	Oil Age	hrs	Client Info		0	0	0
Sample Status Image: Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Water WC Method >0.21 NEG NEG NEG WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >51 8 9 17 Chromium ppm ASTM D5185m >51 0 <1	-		Client Info		Changed	Changed	Changed
Water WC Method >0.21 NEG NEG NEG Glycol WC Method Imil/base current history1 history2 tron ppm ASTM D5185m >51 8 9 17 Chromium ppm ASTM D5185m >51 0 <1	-				-		
Glycol WC Method NEG NEG NEG WEAR METALS method limil/base current history1 history2 Iron ppm ASTM D5185m >51 8 9 17 Chromium ppm ASTM D5185m >11 <1 <1 <1 0 Nickel ppm ASTM D5185m >5 0 <1 0 0 Aluminum ppm ASTM D5185m >3 <1 0 0 0 Aluminum ppm ASTM D5185m >26 <1 2 75 Tin ppm ASTM D5185m >26 <1 <1 0 Cadmium ppm ASTM D5185m <4 <1 <1 0 0 Adaminum ppm ASTM D5185m <1 0 0 1 1 0 0 1 1 0 0 1 1 1 1 1 1 1 1	CONTAMINATIO	N	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >51 8 9 17 Chromium ppm ASTM D5185m >5 0 <1	Water		WC Method	>0.21	NEG	NEG	NEG
Iron ppm ASTM D5185m >51 8 9 17 Chromium ppm ASTM D5185m >11 <1	Glycol		WC Method		NEG	NEG	NEG
Dromium ppm ASTM D5185m >11 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >5 0 <1 0 Titanium ppm ASTM D5185m >3 <1	Iron	ppm	ASTM D5185m	>51	8	9	17
Titanium ppm ASTM D5185m <1 <1 <1 0 Silver ppm ASTM D5185m >3 <1	Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Silver ppm ASTM D5185m >3 <1 0 0 Aluminum ppm ASTM D5185m >31 3 4 2 Lead ppm ASTM D5185m >26 <1 0 0 Copper ppm ASTM D5185m >26 <1 2 75 Tin ppm ASTM D5185m >4 <1 0 0 Vanadium ppm ASTM D5185m >4 <1 <1 0 0 Cadmium ppm ASTM D5185m <4 <1 <1 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 230 230 212 0 Magnesium ppm ASTM D5185m 236 264 262 Qalcium ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 3352 3337 3	Nickel	ppm	ASTM D5185m	>5	0	<1	0
Aluminum ppm ASTM D5185m >31 3 4 2 Lead ppm ASTM D5185m >26 <1	Titanium	ppm	ASTM D5185m		<1	<1	0
Lead ppm ASTM D5185m >26 <1 0 0 Copper ppm ASTM D5185m >26 <1	Silver	ppm	ASTM D5185m	>3	<1	0	0
Copper ppm ASTM D5185m >26 <1 2 75 Tin ppm ASTM D5185m >4 <1	Aluminum	ppm	ASTM D5185m	>31	3	4	2
Tin ppm ASTM D5185m >4 <1 <1 0 Vanadium ppm ASTM D5185m <1	Lead	ppm	ASTM D5185m	>26	<1	0	0
Vanadium ppm ASTM D5185m <1 <1 0 Cadmium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>26	<1	2	75
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 230 230 212 Barium ppm ASTM D5185m 230 230 212 Barium ppm ASTM D5185m 236 264 262 Maganese ppm ASTM D5185m 236 264 262 Maganesum ppm ASTM D5185m 755 876 784 Calcium ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 913 954 880 Sulfur ppm ASTM D5185m 3352 3337 3222 CONTAMINANTS method limit/base current history1 history2 Solion ppm ASTM D5185m >22 6 6 7 Solion ppm ASTM D5185m >21 <t< td=""><td>Tin</td><td>ppm</td><td>ASTM D5185m</td><td>>4</td><th><1</th><td><1</td><td>0</td></t<>	Tin	ppm	ASTM D5185m	>4	<1	<1	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 230 230 212 Barium ppm ASTM D5185m 236 264 262 Manganese ppm ASTM D5185m 236 264 262 Magnesium ppm ASTM D5185m 755 876 784 Calcium ppm ASTM D5185m 755 876 784 Calcium ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 3352 3337 3222 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >20	Vanadium	ppm	ASTM D5185m		<1	<1	0
Boron ppm ASTM D5185m 230 230 212 Barium ppm ASTM D5185m <1	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 236 264 262 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		230	230	212
Astmutosity Astmutosity	Barium	ppm	ASTM D5185m		<1	0	0
Magnesium ppm ASTM D5185m 755 876 784 Calcium ppm ASTM D5185m 1420 1605 1453 Phosphorus ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 1008 1123 1069 Sulfur ppm ASTM D5185m 3352 3337 3222 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D5324 >2.1 <1.0	Molybdenum	ppm	ASTM D5185m		236	264	262
Calcium ppm ASTM D5185m 1420 1605 1453 Phosphorus ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 1008 1123 1069 Sulfur ppm ASTM D5185m 3352 3337 3222 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >20 2 2 2 Potassium ppm ASTM D5854 >2.1 <1.0	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus ppm ASTM D5185m 913 954 880 Zinc ppm ASTM D5185m 1008 1123 1069 Sulfur ppm ASTM D5185m 3352 3337 3222 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >20 2 2 2 Potassium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 Soot % % *ASTM D7844 >3 0.2 0.2 0.3 Nitration Abs/.mm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.0 2.4 24.3	Magnesium	ppm	ASTM D5185m		755	876	784
Zinc ppm ASTM D5185m 1008 1123 1069 Sulfur ppm ASTM D5185m 3352 3337 3222 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >20 2 2 2 Potassium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 0.1.0 <1.0	Calcium	ppm	ASTM D5185m		1420	1605	1453
SulfurppmASTM D5185m335233373222CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>22667SodiumppmASTM D5185m>31422PotassiumppmASTM D5185m>20222Fuel%ASTM D5185m>20222Fuel%ASTM D5185m>20222Soot %%*ASTM D7824>2.1<1.0	Phosphorus	ppm	ASTM D5185m		913	954	880
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >31 4 2 2 Potassium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 Soot % % ASTM D524 >2.1 <1.0	Zinc	ppm	ASTM D5185m		1008	1123	1069
Silicon ppm ASTM D5185m >22 6 6 7 Sodium ppm ASTM D5185m >31 4 2 2 Potassium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D5185m >20 2 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7624 >20 8.4 8.4 9.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	Sulfur	ppm	ASTM D5185m		3352	3337	3222
Sodium ppm ASTM D5185m >31 4 2 2 Potassium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D3524 >2.1 <1.0 <1.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	CONTAMINANTS	\$	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 2 2 Fuel % ASTM D3524 >2.1 <1.0	Silicon	ppm	ASTM D5185m	>22	6	6	7
Fuel % ASTM D3524 >2.1 <1.0 <1.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	Sodium	ppm	ASTM D5185m	>31	4	2	2
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	Potassium	ppm	ASTM D5185m	>20	2	2	2
Soot % % *ASTM D7844 >3 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7415 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	Fuel	%	ASTM D3524	>2.1	<1.0	<1.0	<1.0
Nitration Abs/cm *ASTM D7624 >20 8.4 8.4 9.5 Sulfation Abs/.1mm *ASTM D7615 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2	Soot %	%	*ASTM D7844	>3	0.2	0.2	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 22.0 22.4 24.3 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2							
Oxidation Abs/.1mm *ASTM D7414 >25 16.1 16.8 18.2							
	FLUID DEGRADA		method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	16.8	18.2
	Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.1	8.4	9.1



Aug2/22

3.

3.0

<u>a</u>2.0

2²15

1.0

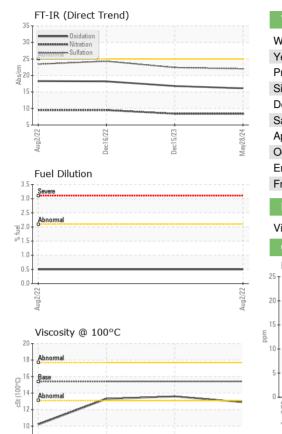
0.5 0.0

Fuel Dilution

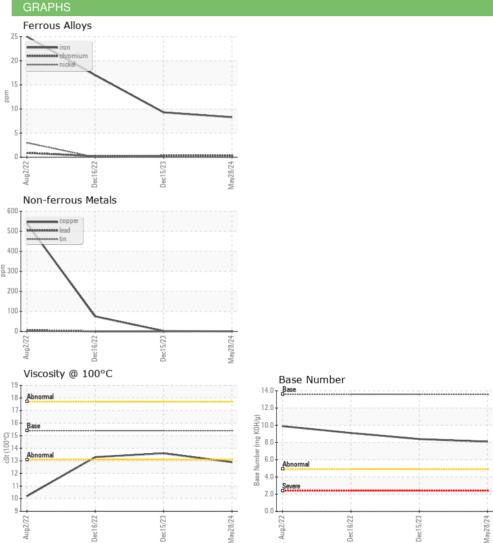
Dec16/22

Jec15/23

OIL ANALYSIS REPORT







Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **JRE - ASHLAND** Sample No. : JR0211410 Received : 29 May 2024 11047 LEADBETTER RD Lab Number : 06194763 Tested : 31 May 2024 ASHLAND, VA : 31 May 2024 - Jonathan Hester Unique Number : 11056886 Diagnosed US 23005 Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN) Contact: DAVID ZIEG Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dzieg@jamesriverequipment.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (804)798-6001 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (804)798-0292

Report Id: JAMASH [WUSCAR] 06194763 (Generated: 06/03/2024 07:03:33) Rev: 1

Contact/Location: DAVID ZIEG - JAMASH

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