

OIL ANALYSIS REPORT

Sample Rating Trend





Recommendation

Contamination

Fluid Condition

Wear

oil.

Fluid

Resample at the next service interval to monitor.

There is no indication of any contamination in the

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

All component wear rates are normal.

oil is suitable for further service.

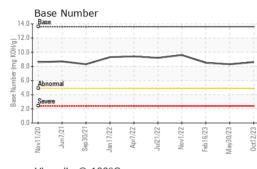
JOHN DEERE 524K 1DW524KZHCE643734 Component Diesel Engine

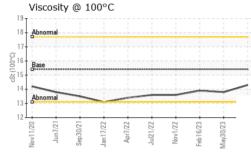
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

Sample Number Client Info JR0180423 JR0164899 JR0147396 Sample Date Info 12 Oct 2023 30 May 2023 16 Feb 2023 Machine Age hrs Client Info 15597 15113 14647 Oil Opanged Client Info O 0 0 0 0 Oil Changed Client Info Changed Changed Changed Changed Changed Changed Changed Changed NORMAL NORMA	PLUS 50 II 15W40 (-	GAL)	Nov2020 Jun2	021 Sep2021 Jan2022 Apr2	022 Jul2022 Nov2022 Feb2023 May	2023 Oct2023	
Sample Date Client Info 12 Oct 2023 30 May 2023 16 Feb 2023 Machine Age hrs Client Info 15597 15113 14647 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info Changed Changed	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 15597 15113 14647 Oil Age irrs Client Info 0 0 0 0 Sample Status Client Info Changed Changed Changed Changed NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >2.1 <1.0	Sample Number		Client Info		JR0180423	JR0164689	JR0147396
Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info Changed Changed Changed Changed Changed Changed NORMAL	Sample Date		Client Info		12 Oct 2023	30 May 2023	16 Feb 2023
Oil Changed Sample StatusClient InfoChanged NORMALChanged NORMALChanged NORMALChanged NORMALCONTAMINATIONmethodlimit/basecurrenthistory1history2FuelWC Method>2.1<1.0	Machine Age	hrs	Client Info		15597	15113	14647
Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >2.1 <1.0	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >2.1 <1.0	Oil Changed		Client Info		Changed	Changed	Changed
Fuel WC Method >2.1 <1.0 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >51 32 21 10 Chromium ppm ASTM D5185m >51 32 2 1 1 Nickel ppm ASTM D5185m >5 2 2 2 1 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >26 1 <1 <1 <1 Vanadium ppm ASTM D5185m 26 1 <1< <1 <1 Vanadium ppm ASTM D5185m 26 1 <1< <1 <1 <1 <1 <1 <1 <1 <1 <1< <1 <1< <1< <1<	Sample Status				NORMAL	NORMAL	NORMAL
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >51 32 21 10 Chromium ppm ASTM D5185m >5 2 2 <1	CONTAMINATION	١	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >51 32 21 10 Chromium ppm ASTM D5185m >51 32 21 10 Nickel ppm ASTM D5185m >5 2 2 <1	Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Iron ppm ASTM D5185m >511 32 21 10 Chromium ppm ASTM D5185m >11 1 <1	Glycol		WC Method		NEG	NEG	NEG
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Nickel ppm ASTM D5185m >5 2 2 <1 Titanium ppm ASTM D5185m <31	Chromium	ppm	ASTM D5185m	>11	1	<1	<1
Titanium ppm ASTM D5185m <1 <1 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >31 2 2 2 Lead ppm ASTM D5185m >26 0 2 <1	Nickel		ASTM D5185m	>5		2	<1
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Copper ppm ASTM D5185m >26 1 <1 <1 Tin ppm ASTM D5185m >4 0 <1							
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Molybdenum ppm ASTM D5185m 238 235 229 Manganese ppm ASTM D5185m 0 <1	Barium		ASTM D5185m		0	0	<1
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Magnesium ppm ASTM D5185m 711 827 767 Calcium ppm ASTM D5185m 1257 1405 1314 Phosphorus ppm ASTM D5185m 796 913 816 Zinc ppm ASTM D5185m 961 1112 1040 Sulfur ppm ASTM D5185m 961 1112 1040 Sulfur ppm ASTM D5185m 3006 3734 3378 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >22 11 8 6 Sodium ppm ASTM D5185m >20 2 3 <1	-		ASTM D5185m		0	<1	<1
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Silicon ppm ASTM D5185m >22 11 8 6 Sodium ppm ASTM D5185m >31 0 3 2 Potassium ppm ASTM D5185m >20 2 3 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 8.8 8.5 Sulfation Abs/.tmm *ASTM D7415 >30 20.1 22.6 22.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.tmm *ASTM D7414 >25 14.8 16.5 16.7							3378
Sodium ppm ASTM D5185m >31 0 3 2 Potassium ppm ASTM D5185m >20 2 3 <1	CONTAMINANTS		method	limit/base	current	history1	history2
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INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.2 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 22.6 22.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 16.5 16.7	Sodium	ppm	ASTM D5185m	>31	0	3	2
Soot % % *ASTM D7844 >3 0.2 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 7.6 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 22.6 22.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 16.5 16.7	Potassium	ppm	ASTM D5185m	>20	2	3	<1
Nitration Abs/cm *ASTM D7624 >20 7.6 8.8 8.5 Sulfation Abs/.1mm *ASTM D7415 >30 20.1 22.6 22.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 16.5 16.7	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 7.6 8.8 8.5 Sulfation Abs/.1mm *ASTM D7615 >30 20.1 22.6 22.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 16.5 16.7	Soot %	%	*ASTM D7844	>3	0.2	0.3	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 20.1 22.6 22.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.8 16.5 16.7	Nitration	Abs/cm	*ASTM D7624	>20	7.6	8.8	8.5
Oxidation Abs/.1mm *ASTM D7414 >25 14.8 16.5 16.7	Sulfation		*ASTM D7415	>30			22.2
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 13.6 8.6 8.3 8.5	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	16.5	16.7
	Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.6	8.3	8.5

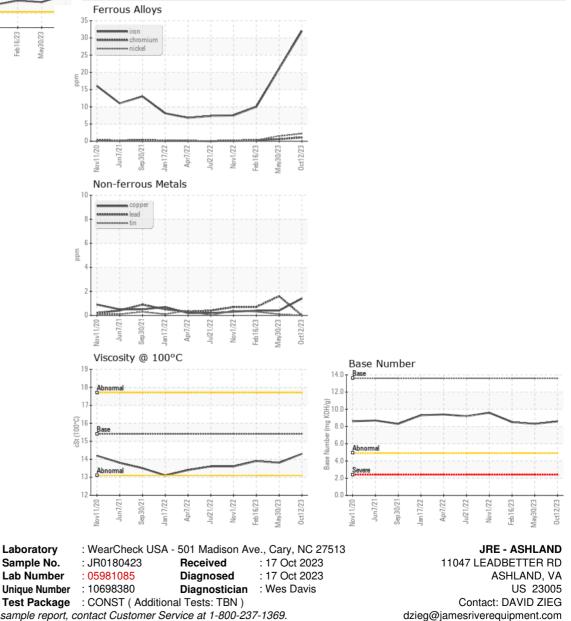


OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	13.8	13.9
GRAPHS						





 Certificate 12367
 Test Package
 : CONST (Additional Tests: TBN)

 To discuss this sample report, contact Customer Service at 1-800-237-1369.
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 * - 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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