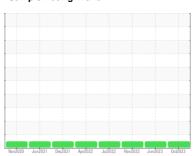


## **OIL ANALYSIS REPORT**

#### **Sample Rating Trend**







# 20

# JOHN DEERE 444K 1DW444KZVKF697030

Component

Diesel Engine

CHEVRON URSA SUPER PLUS EC 15W40 (--- 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**

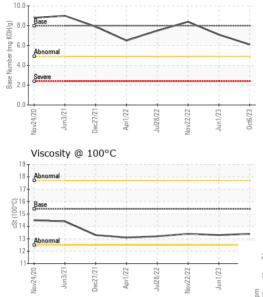
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

1 200 20 10 10 10 (-	GAL)	Nov2020 J	lun2021 Dec2021 Apr20.	22 Jul2022 Nov2022 Jun202	3 Oct2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		MT0004924	MT0004923	MT0004929	
Sample Date		Client Info		06 Oct 2023	01 Jun 2023	22 Nov 2022	
Machine Age	hrs	Client Info		6997	6501	5987	
Oil Age	ge hrs		Client Info		514	491	
Oil Changed	il Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINATIO	method	limit/base	current	history1	history2		
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>51	9	11	9	
Chromium	ppm	ASTM D5185m	>11	<1	0	<1	
Nickel	ppm	ASTM D5185m	>5	<1	0	0	
Titanium	ppm	ASTM D5185m		<1	0	<1	
Silver	ppm	ASTM D5185m	>3	0	0	0	
Aluminum	ppm	ASTM D5185m	>31	3	3	4	
Lead	ppm	ASTM D5185m	>26	<1	0	<1	
Copper	ppm	ASTM D5185m	>26	1	1	3	
Tin	ppm	ASTM D5185m	>4	<1	0	<1	
Vanadium	ppm	ASTM D5185m		<1	0	0	
Cadmium	ppm	ASTM D5185m		<1	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		400	357	340	
Barium	ppm	ASTM D5185m		3	0	0	
Molybdenum	ppm	ASTM D5185m		88	89	116	
Manganese	ppm	ASTM D5185m		<1	0	<1	
Magnesium	ppm	ASTM D5185m		376	405	472	
Calcium	ppm	ASTM D5185m		1345	1523	1440	
Phosphorus	ppm	ASTM D5185m	1200	971	1048	997	
Zinc	ppm	ASTM D5185m	1300	1152	1304	1232	
Sulfur	ppm	ASTM D5185m		2909	3963	3775	
CONTAMINANTS	;	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>22	5	5	5	
Sodium	ppm	ASTM D5185m	>31	3	6	2	
Potassium	ppm	ASTM D5185m	>20	<1	1	1	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3	
Nitration	Abs/cm	*ASTM D7624	>20	7.1	7.7	8.1	
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	22.5	22.9	
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	16.7	16.7	
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	6.1	7.1	8.4	
. ,	- 0						



Base Number

### **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
<b>Emulsified Water</b>	scalar	*Visual	>0.21	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method				history2

Vis	sc @ 100	°C	CS	St	ASTM	D445	15.4		13	3.4		13.3		1	3.4	
(	RAPHS															
0.00	ron (ppm	1)						100		d (ppi	m)					
17	Severe				*******			100	Seve	re				***************************************		
150									J.							
톱 100-								E 40								
50 - 6	Abnormal			-				20	Abno	rmal						
ياه	21+	21-	22	22	22	23	23 👭	0		21+	21-	22	22 -	22	23	23
Nov/24/20	Jun3/21	Dec27/21	Apr1/22	Jul28/22	Nov22/22	Jun1/23	Oct6/23 -		Nov24/20	Jun3/21	Dec27/21	Apr1/22	Jul28/22	Nov22/22	Jun1/23	Oct6/23 -
	Aluminum	(ppm	1)						Chr	omiur	n (ppr	n)				
60 T 3	Severe							25	Seve							
40 -	Abnormal							20 _ 15								
돌 30 - 호 20 -	honorma				*****			E 10	Abno	rmal						
10								5	-							
υĽ		21-	22	22	22	23	23	0		-12	-12	22	22 -	- 22	23	23
Nov/24/20	Jun3/21	Dec27/21	Apr1/22	Jul28/22	Nov22/22	Jun1/23	Oct6/23 .		Nov24/20	Jun3/21	Dec27/21	Apr1/22 -	Jul28/22	Nov22/22	Jun1/23	Oct6/23
	Copper (p	pm)							Silio	on (p	pm)					
150	Severe				7			40	Seve	re						
100-								30	Abno							
등 50 +								Md 20								
4	Abnormal				******			10								
0 1	-12/	/21-	722	. 22	722	-23	73	0	720		12/	722	722	22		
Nov/24/20	Jun3/21	Dec27/21-	Apr1/22	Jul28/22	Nov22/22	Jun1/23	Oct6/23 -		Nov24/20	Jun3/21	Dec27/21	Apr1/22 -	Jul28/22 -	Nov22/22	Jun1/23	Oct6/23 -
	iscosity (	@ 100	°C						Bas	e Nun	nber					
20 18	Abnormal							10.0 0H/a) 8.0	Base							
	Base							) 6.0 W 6.0	Abno	vrm al		_				\
(100-01) 14-	Abnormal							4.0								
12 -	nun dilila							Base Number (mg KOH/g) 0.5 0.9 0.8	Seve	e .						
10 4	Jun3/21+	1/21	Apr1/22	ul28/22	v22/22	un1/23	Oct6/23	0.0	v24/20	Jun3/21	ec27/21	Apr1/22	ul28/22	w22/22 <del> </del>	un1/23	Oct6/23
v24/20	E E	ec27/21	\pr1	u128	v22	E	Oct6		v24	E III	ec27	\pr1	128	v22	E	Oct6



Laboratory Sample No. Lab Number Unique Number : 10697443

: MT0004924 : 05980148

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Oct 2023 Diagnosed

: 17 Oct 2023 Diagnostician : Wes Davis

Test Package : MOBCE ( Additional Tests: TBN ) 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.

**EPALLET** 7825 TR 611 FREDERICKSBURH, OH US 44627

Contact: E BYLER ebyler@epalletinc.com T: (330)674-4773

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)