

## **OIL ANALYSIS REPORT**

Sample Rating Trend



# JOHN DEERE 116

Diesel Engine Fluid MOBIL 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.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		JR0172473	JR0117818	JR0117933
Sample Date		Client Info		19 Jul 2023	14 Apr 2023	10 Dec 2022
Machine Age	hrs	Client Info		5789	5194	4052
Oil Age	hrs	Client Info		500	550	500
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0	1.6	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	14	16	17
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>31	<1	<1	<1
Lead	ppm	ASTM D5185m	>26	0	0	1
Copper	ppm	ASTM D5185m	>26	1	<1	2
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		6	5	5
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		59	55	52
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		947	896	874
Calcium	ppm	ASTM D5185m		1247	1303	1330
Phosphorus	ppm	ASTM D5185m		1094	1079	966
Zinc	ppm	ASTM D5185m		19/1	1010	1031
C. If				1341	1316	1201
Sultur	ppm	ASTM D5185m		4132	4438	3781
CONTAMINANTS	ppm	ASTM D5185m method	limit/base	4132 current	4438 history1	3781 history2
CONTAMINANTS Silicon	ppm ppm	ASTM D5185m method ASTM D5185m	limit/base	4132 current	4438 history1	3781 history2
CONTAMINANTS Silicon Sodium	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	limit/base >22 >118	4132 current 4 2	1316 4438 history1 4 3	3781 history2 4 2
CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >22 >118 >20	4132 current 4 2 0	1316 4438 history1 4 3 0	3781 history2 4 2 <1
CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base >22 >118 >20 limit/base	4132 current 4 2 0 current	1316 4438 history1 4 3 0 history1	3781 history2 4 2 <1 history2
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	limit/base >22 >118 >20 limit/base >3	4132 current 4 2 0 current 0.5	1316 4438 history1 4 3 0 history1 0.4	3781 history2 4 2 <1 history2 0.7
Sultur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm % Abs/cm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	limit/base >22 >118 >20 limit/base >3 >20	1341     4132     current     4     2     0     current     0.5     7.5	1316 4438 history1 4 3 0 history1 0.4 7.2	1201 3781 history2 4 2 <1 history2 0.7 8.5
Solitor CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm % Abs/cm Abs/cm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7615	limit/base >22 >118 >20 limit/base >3 >20 >30	4132 current 4 2 0 current 0.5 7.5 19.6	1316   4438   history1   4   3   0   history1   0.4   7.2   17.8	1201 3781 history2 4 2 <1 history2 0.7 8.5 21.5
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >22 >118 >20 limit/base >3 >20 >30 limit/base	1341   4132   current   4   2   0   current   0.5   7.5   19.6   current	1316 4438 history1 4 3 0 history1 0.4 7.2 17.8 history1	1201 3781 history2 4 2 <1 history2 0.7 8.5 21.5 history2
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ym Abs/cm Abs/cm Abs/1mm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415 Method *ASTM D7414	limit/base >22 >118 >20 limit/base >3 >20 >30 limit/base >25	1341   4132   current   4   2   0   current   0.5   7.5   19.6   current   14.7	1316   4438   history1   4   3   0   history1   0.4   7.2   17.8   history1   13.6	1201 3781 history2 4 2 <1 history2 0.7 8.5 21.5 history2 15.6
Sultur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation Base Number (BN)	ppm ppm ppm ppm ypm % Abs/cm Abs/.1mm TION Abs/.1mm mg KOH/g	ASTM D5185m Method ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method *ASTM D7414 ASTM D2896	limit/base >22 >118 >20 limit/base >3 >20 >30 limit/base >25	1341   4132   current   4   2   0   current   0.5   7.5   19.6   current   14.7   9.5	1316   4438   history1   4   3   0   history1   0.4   7.2   17.8   history1   13.6   8.1	1201 3781 history2 4 2 <1 history2 0.7 8.5 21.5 history2 15.6 10.5



## **OIL ANALYSIS REPORT**

VISUAL



		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			
122	/23 -	Appearance	scalar	*Visual	NORMI	NORMI	NORMI	NORMI			
Dec10	Apr14 Jul19	Odor	scalar	*Visual	NORMI	NORMI	NORMI	NORMI			
-		Emulsified Water	scalar	*Visual	>0.21	NEG	NEG	NEG			
C		Free Water	scalar	*Visual		NEG	NEG	NEG			
					11 11 11						
		FLUID PROPERT	IES	method	limit/base	current	history1	history2			
		Visc @ 100°C	cSt	ASTM D445		12.6	12.4	12.8			
		GRAPHS									
		Ferrous Alloys									
22	23	16- iron									
ec10/	Apr14/	14 - nickel									
	4	12-									
		E <sup>10</sup>									
		6									
		4-									
		2									
			5	~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
		0ct2/2	sc10/2	or14/2	ul19/2						
		SI − C − C − C − C − C − C − C − C − C −	De	Ag	- T						
		Non-ferrous Metals									
		copper									
		250 tim									
		200									
		톨 150 - · · · · · · · · · · · · · · · · · ·									
		100									
		<sup>30</sup>									
		5 51 <sup>1</sup> 0	22 -	23.	23						
		0ct2 Apr18/	)ec10/	Apr14/	/e119/						
		Viscosity @ 100°C									
		<sup>18</sup>			12.0	Base Number					
		17- Abnormal			10.0		_				
		16			(B/H)						
		ຮີ 15-			0.8 g						
		E 14			0.0 ge	Abnormal					
		13			4.0						
		Abnormal			2.0	Severe					
		3/21	- 22/0	4/23	0.0	3/21-	)/22 -	1/23			
		0ct	Dec10	Apr14	Jults	0ct Apr16	Dec1(	Apr14 Jul19			
4	Laboratory	: WearCheck USA - 5	01 Madis	son Ave., Ca	ry, NC 27513	700					
ANAB	Sample No. Lab Number	: 05904851	Diagnos	u :∠i. ed :24	Jul 2023 Jul 2023	760					
TESTING LABORATORY	Unique Number	: 10566207	Diagnost	ician : We	s Davis		•	US 23890			
Certificate L2367	Test Package	: CONST ( Additional	Tests: T	BN)				Contact: JW			
To discuss this	s sample report,	contact Customer Servi	ice at 1-8	00-237-1369	9.		jerald.tapp	iii@scotts.com			
* - Denotes tes	st methods that a	are outside of the ISO 1.	/025 sco	pe of accrea	litation.	ICGM 106-2012	T:	(804)834-3986			
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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)