

OIL ANALYSIS REPORT

JOHN DEERE 8R310 11614 (S/N 1RW8310DTNB208641)

Diesel Engine

DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

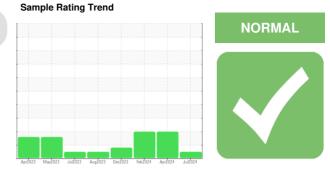
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

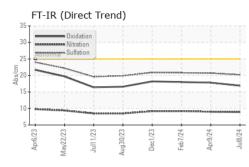
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.



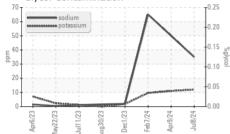
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0899091	WC0913181	WC0888151
Sample Date		Client Info		08 Jul 2024	09 Apr 2024	07 Feb 2024
Machine Age	hrs	Client Info		6473	5796	5024
Oil Age	hrs	Client Info		677	772	866
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	49	6 5	1 13
Chromium	ppm	ASTM D5185m	>11	<1	1	2
Nickel	ppm	ASTM D5185m	>5	3	1	6
Titanium	ppm	ASTM D5185m		<1	<1	3
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		2	3	3
Lead	ppm	ASTM D5185m		2	6	10
Copper	ppm	ASTM D5185m		6	13	12
Tin	ppm	ASTM D5185m		0	1	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES	1-1-	method	limit/base	current	history1	history2
Boron	nnm	ASTM D5185m	250	0	4	7
Barium	ppm	ASTM D5185m	10	0	0	0
	ppm	ASTM D5185m	100	60	60	63
Molybdenum	ppm	ASTIVI DOTIODITI	100		60	63
Manganese	10.10.100	ACTM DE10Em		-	-1	-1
0	ppm	ASTM D5185m	450	<1	1	<1
Magnesium	ppm	ASTM D5185m	450	1002	933	967
Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	3000	1002 1230	933 1311	967 1208
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150	1002 1230 1032	933 1311 1072	967 1208 1030
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	1002 1230 1032 1317	933 1311 1072 1363	967 1208 1030 1282
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250	1002 1230 1032 1317 3066	933 1311 1072 1363 3057	967 1208 1030 1282 2361
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3000 1150 1350 4250 limit/base	1002 1230 1032 1317	933 1311 1072 1363 3057 history1	967 1208 1030 1282 2361 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250 limit/base >22	1002 1230 1032 1317 3066 current 4	933 1311 1072 1363 3057 history1 6	967 1208 1030 1282 2361 history2 8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >22 >216	1002 1230 1032 1317 3066 current 4 35	933 1311 1072 1363 3057 history1 6 50	967 1208 1030 1282 2361 history2 8 65
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >22	1002 1230 1032 1317 3066 <u>current</u> 4 35 12	933 1311 1072 1363 3057 history1 6 50 11	967 1208 1030 1282 2361 history2 8 65 10
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982	3000 1150 1350 4250 limit/base >22 >216 >20	1002 1230 1032 1317 3066 current 4 35 12 NEG	933 1311 1072 1363 3057 history1 6 50 11 NEG	967 1208 1030 1282 2361 history2 8 65 10 NEG
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982	3000 1150 1350 4250 <i>limit/base</i> >22 >216 >20 <i>limit/base</i>	1002 1230 1032 1317 3066 current 4 35 12 NEG current	933 1311 1072 1363 3057 history1 6 50 11 NEG history1	967 1208 1030 1282 2361 history2 8 65 10 NEG history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method	3000 1150 1350 4250 limit/base >22 >216 >20 limit/base >3	1002 1230 1032 1317 3066 current 4 35 12 NEG current 0.6	933 1311 1072 1363 3057 history1 6 50 11 NEG history1 0.7	967 1208 1030 1282 2361 history2 8 65 10 NEG history2 0.8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982	3000 1150 1350 4250 limit/base >22 >216 >20 limit/base >3	1002 1230 1032 1317 3066 current 4 35 12 NEG current	933 1311 1072 1363 3057 history1 6 50 11 NEG history1	967 1208 1030 1282 2361 history2 8 65 10 NEG history2 0.8 9.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method	3000 1150 1350 4250 limit/base >22 >216 >20 limit/base >3 >20	1002 1230 1032 1317 3066 current 4 35 12 NEG current 0.6	933 1311 1072 1363 3057 history1 6 50 11 NEG history1 0.7	967 1208 1030 1282 2361 history2 8 65 10 NEG history2 0.8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844	3000 1150 1350 4250 limit/base >22 >216 >20 limit/base >3 >20	1002 1230 1032 1317 3066 current 4 35 12 NEG current 0.6 8.9	933 1311 1072 1363 3057 history1 6 50 11 NEG 11 NEG 0.7 9.0	967 1208 1030 1282 2361 history2 8 65 10 NEG NEG 0.8 9.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7624	3000 1150 1350 4250 limit/base >22 >216 >20 limit/base >3 >20 >30 limit/base	1002 1230 1032 1317 3066 current 4 35 12 NEG current 0.6 8.9 20.2	933 1311 1072 1363 3057 history1 6 50 11 NEG history1 0.7 9.0 20.7	967 1208 1030 1282 2361 history2 8 65 10 NEG history2 0.8 9.2 20.8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm % % Abs/cm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844 *ASTM D7415	3000 1150 1350 4250 limit/base >22 >216 >20 limit/base >3 >20 >30 limit/base >20	1002 1230 1032 1317 3066 current 4 35 12 NEG current 0.6 8.9 20.2 current	933 1311 1072 1363 3057 history1 6 50 11 NEG 11 NEG 0.7 9.0 20.7 history1	967 1208 1030 1282 2361 ►history2 8 • 65 10 NEG • history2 0.8 9.2 20.8 ► history2

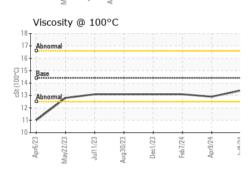


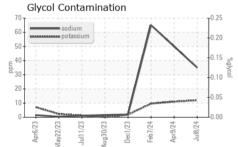
OIL ANALYSIS REPORT



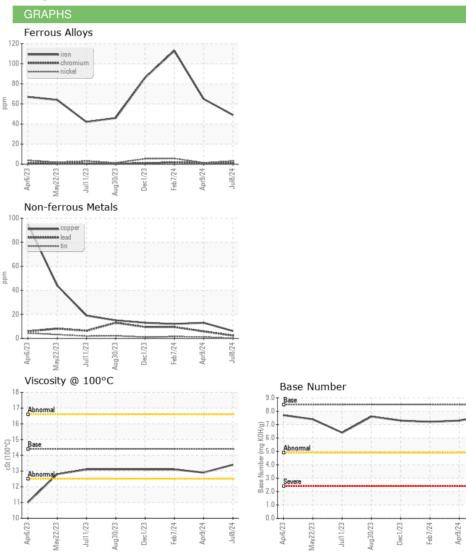








VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	14.4	13.4	12.9	13.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 TRADER CONSTRUCTION CO. Sample No. : WC0899091 Received : 15 Jul 2024 PO DRAWER 1578 Lab Number : 06235463 Tested : 16 Jul 2024 NEW BERN, NC Unique Number : 11124297 Diagnosed : 16 Jul 2024 - Don Baldridge US 28563 Test Package : CONST (Additional Tests: Glycol, TBN) Contact: MIKE WYATT Certificate 12367 mwyatt@traderconstruction.com To discuss this sample report, contact Customer Service at 1-800-237-1369. T: (252)633-1399 * - 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) F: (252)638-4871

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