



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
JOHN DEERE 410E-II 1DW410EYPNF715089

Component
Diesel Engine

Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (13 GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0201235	JR0182440	---
Sample Date		Client Info		12 Feb 2024	30 Aug 2023	---
Machine Age	hrs	Client Info		3103	2089	---
Oil Age	hrs	Client Info		1014	380	---
Filter Age	hrs	Client Info		0	380	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				ATTENTION	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	14	12	---
Chromium	ppm	ASTM D5185m	>11	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>31	3	3	---
Lead	ppm	ASTM D5185m	>26	4	6	---
Copper	ppm	ASTM D5185m	>26	10	14	---
Tin	ppm	ASTM D5185m	>4	2	2	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

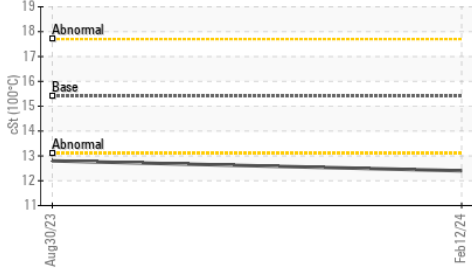
Silicon	ppm	ASTM D5185m	>22	7	5	---
Potassium	ppm	ASTM D5185m	>20	2	<1	---
Fuel	%	ASTM D3524	>8.0	1.2	<1.0	---
Water		WC Method	>0.21	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	9.0	9.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.8	21.9	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG	---

FLUID CONDITION

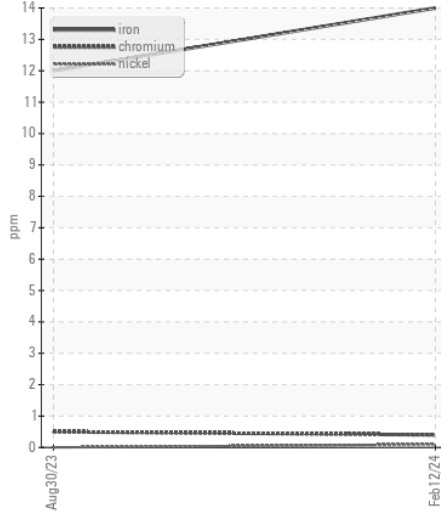
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>31	<1	3	---
Boron	ppm	ASTM D5185m		179	191	---
Barium	ppm	ASTM D5185m		13	0	---
Molybdenum	ppm	ASTM D5185m		275	235	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		821	783	---
Calcium	ppm	ASTM D5185m		1330	1348	---
Phosphorus	ppm	ASTM D5185m		880	829	---
Zinc	ppm	ASTM D5185m		1073	1028	---
Sulfur	ppm	ASTM D5185m		3128	3273	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	16.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.8	8.9	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.4	12.8	---

▲ Viscosity @ 100°C



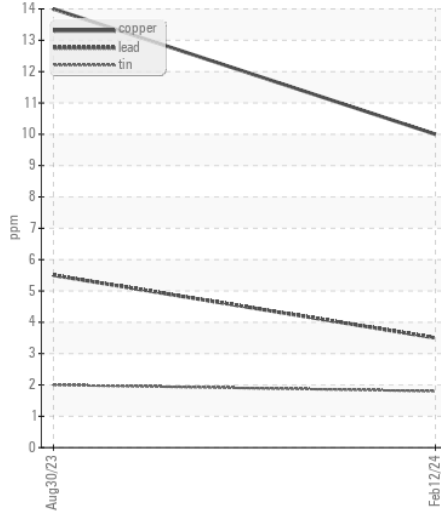
Ferrous Alloys



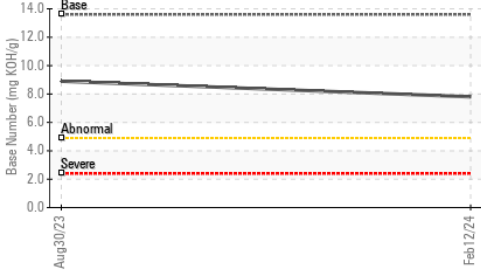
Fuel Dilution



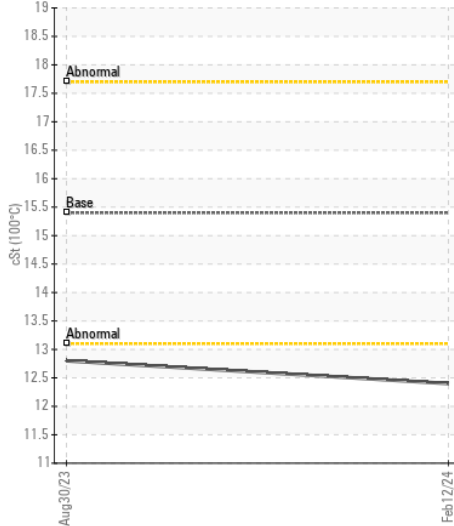
Non-ferrous Metals



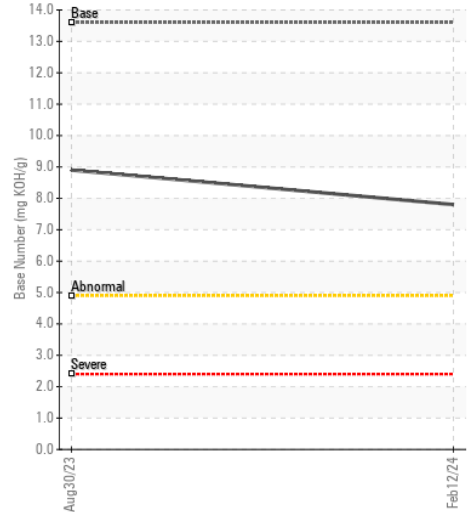
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : JR0201235 Received : 14 Feb 2024
 Lab Number : 06088634 Tested : 18 Feb 2024
 Unique Number : 10876079 Diagnosed : 18 Feb 2024 - Don Baldrige
 Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

JRE - NEW BERN
 3816 MARTIN LUTHER KING BLVD
 NEW BERN, NC
 US 28562
 Contact: NEW BERN SHOP

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

nick.etherdridge@jamesriverequipment.com; canastasio@wearcheckusa.com

* - 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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F: