



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
JOHN DEERE 410E 1DW410EBKNF715204
Component
Main Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (52 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0220746	JR0209000	JR0201111
Sample Date		Client Info		03 Jul 2024	24 Apr 2024	09 Feb 2024
Machine Age	hrs	Client Info		5379	4792	4258
Oil Age	hrs	Client Info		587	534	670
Filter Age	hrs	Client Info		587	534	670
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	9	10	14
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	4
Lead	ppm	ASTM D5185m	>40	4	3	3
Copper	ppm	ASTM D5185m	>300	6	5	5
Tin	ppm	ASTM D5185m	>10	<1	2	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

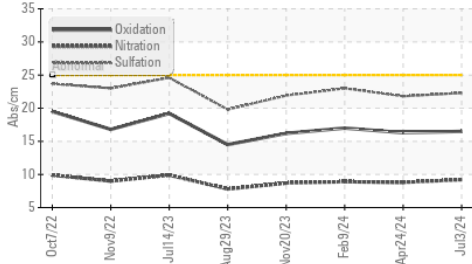
Silicon	ppm	ASTM D5185m	>25	5	7	7
Potassium	ppm	ASTM D5185m	>20	1	3	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.3	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.2	8.8	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	21.8	23.0
Silt	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

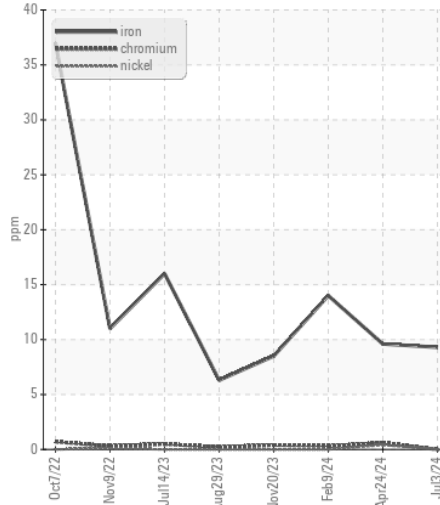
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	3	0
Boron	ppm	ASTM D5185m		173	247	191
Barium	ppm	ASTM D5185m		0	2	13
Molybdenum	ppm	ASTM D5185m		247	249	260
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		841	786	797
Calcium	ppm	ASTM D5185m		1533	1385	1358
Phosphorus	ppm	ASTM D5185m		917	900	934
Zinc	ppm	ASTM D5185m		1080	1057	1022
Sulfur	ppm	ASTM D5185m		3523	3263	3537
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	16.3	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.1	8.5	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	12.8	12.5

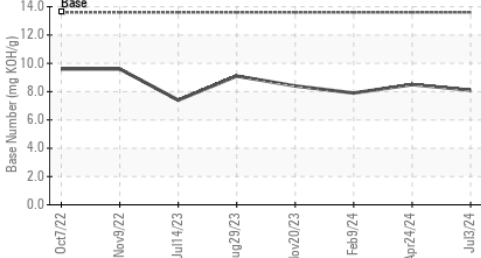
FT-IR (Direct Trend)



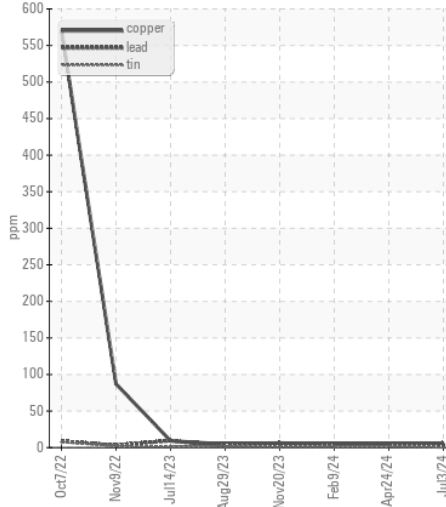
Ferrous Alloys



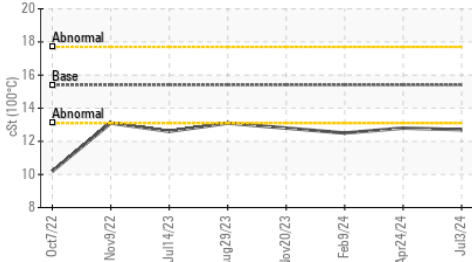
Base Number



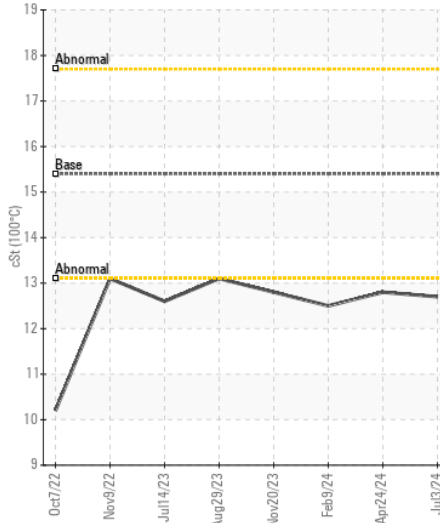
Non-ferrous Metals



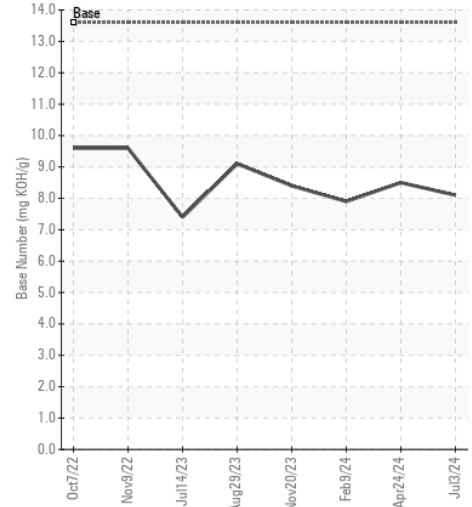
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : JR0220746

Lab Number : 06231271

Unique Number : 11114764

Test Package : CONST (Additional Tests: TBN)

Received : 09 Jul 2024

Tested : 10 Jul 2024

Diagnosed : 10 Jul 2024 - Wes Davis

JRE - NEW BERN

3816 MARTIN LUTHER KING BLVD

NEW BERN, NC

US 28562

Contact: NEW BERN SHOP

rick.etheridge@jamesriverequipment.com;canastasio@wearcheckusa.com

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.

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

T:

F: