



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[W68335]
 Machine Id
JOHN DEERE 210G 1FF210GXHNF530200
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (6 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: W68335)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0220420	JR0168235	JR0122014
Sample Date		Client Info		16 Jul 2024	19 May 2023	25 Jan 2023
Machine Age	hrs	Client Info		2262	1124	875
Oil Age	hrs	Client Info		1138	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated. Valve wear is indicated.

Iron	ppm	ASTM D5185m	>51	▲ 75	16	56
Chromium	ppm	ASTM D5185m	>11	2	<1	2
Nickel	ppm	ASTM D5185m	>5	▲ 13	2	7
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	5	2	4
Lead	ppm	ASTM D5185m	>26	4	0	7
Copper	ppm	ASTM D5185m	>26	21	▲ 59	▲ 454
Tin	ppm	ASTM D5185m	>4	1	1	3
Vanadium	ppm	ASTM D5185m		0	<1	<1
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.

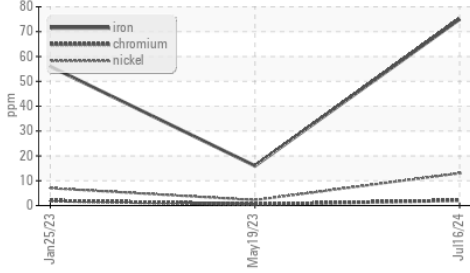
Silicon	ppm	ASTM D5185m	>22	10	9	12
Potassium	ppm	ASTM D5185m	>20	4	1	1
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	11.5	8.3	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.1	21.9	23.5
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

FLUID CONDITION

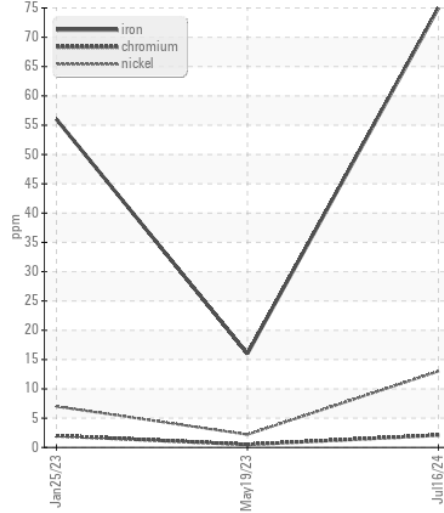
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>31	6	3	8
Boron	ppm	ASTM D5185m		22	234	85
Barium	ppm	ASTM D5185m		<1	0	2
Molybdenum	ppm	ASTM D5185m		226	236	231
Manganese	ppm	ASTM D5185m		2	1	5
Magnesium	ppm	ASTM D5185m		865	850	778
Calcium	ppm	ASTM D5185m		1510	1467	1721
Phosphorus	ppm	ASTM D5185m		940	889	855
Zinc	ppm	ASTM D5185m		1092	1095	1117
Sulfur	ppm	ASTM D5185m		3008	3581	2880
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	16.8	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.9	9.0	9.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.3	11.1

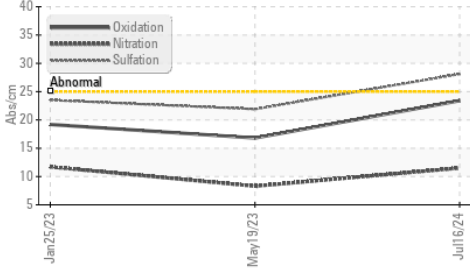
▲ Ferrous Alloys



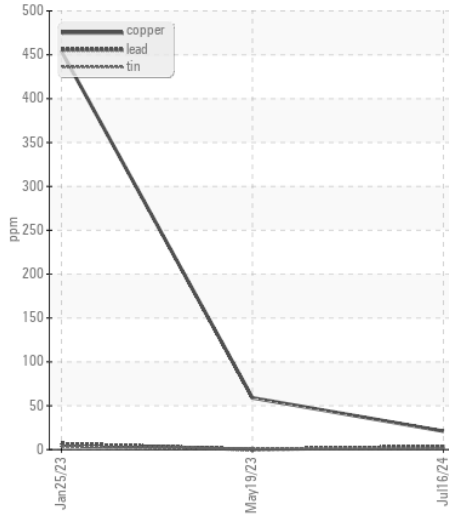
▲ Ferrous Alloys



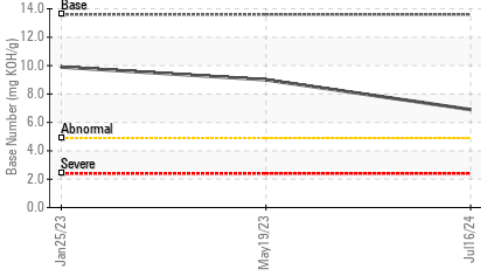
FT-IR (Direct Trend)



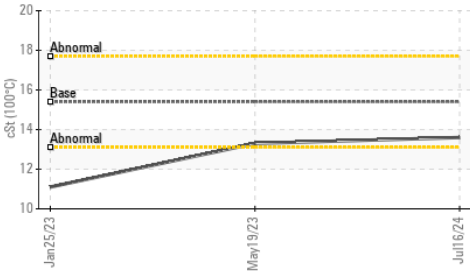
Non-ferrous Metals



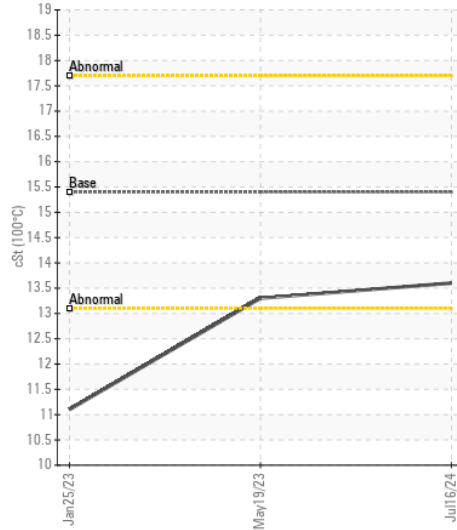
Base Number



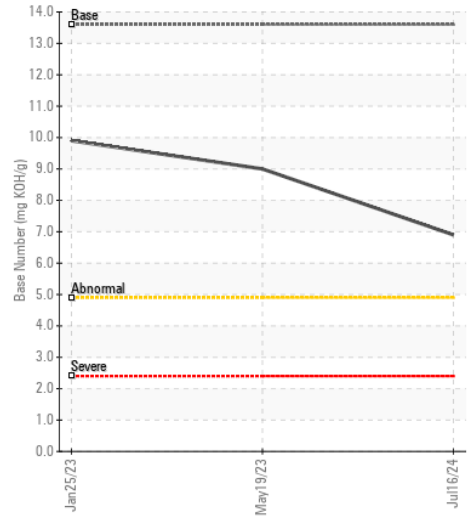
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0220420 **Received** : 18 Jul 2024
Lab Number : 06239923 **Tested** : 18 Jul 2024
Unique Number : 11128757 **Diagnosed** : 19 Jul 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

JRE - CHARLOTTE
 9550 STATESVILLE ROAD
 CHARLOTTE, NC
 US 28269
 Contact: CHARLOTTE SHOP
 myoung@jamesriverequipment.com
 T: (704)597-0211
 F: (704)596-6198

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)