



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
JOHN DEERE 470 P 1FF470PAVPF000228
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (13 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0220200	JR0216101	JR0205411
Sample Date		Client Info		07 Jul 2024	04 Jun 2024	08 Apr 2024
Machine Age	hrs	Client Info		2003	1905	1508
Oil Age	hrs	Client Info		1606	400	340
Filter Age	hrs	Client Info		0	400	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	38	21	27
Chromium	ppm	ASTM D5185m	>11	<1	0	0
Nickel	ppm	ASTM D5185m	>5	5	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	5	5	4
Lead	ppm	ASTM D5185m	>26	7	15	20
Copper	ppm	ASTM D5185m	>26	▲ 565	14	24
Tin	ppm	ASTM D5185m	>4	<1	3	3
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

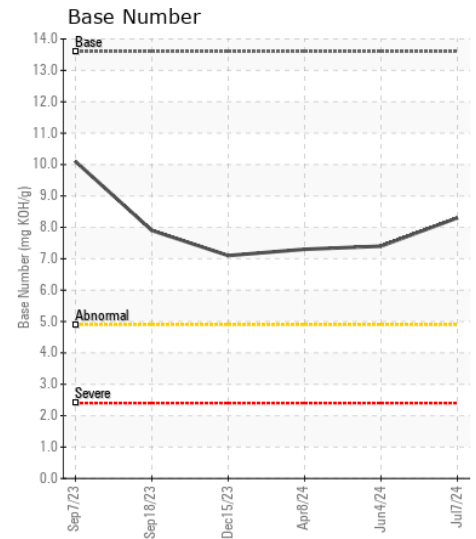
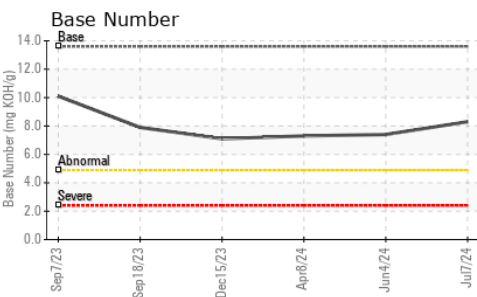
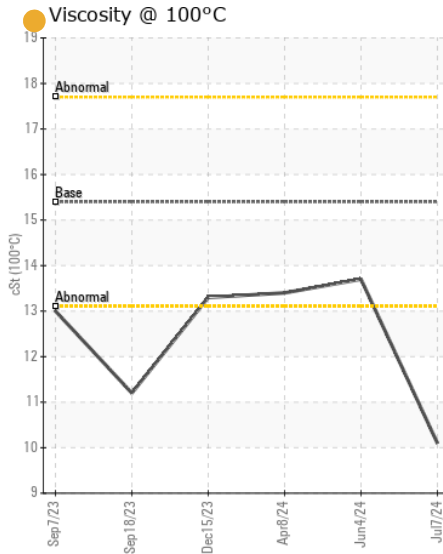
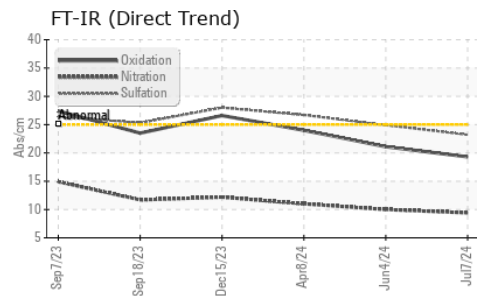
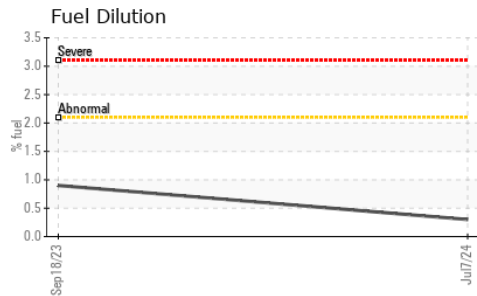
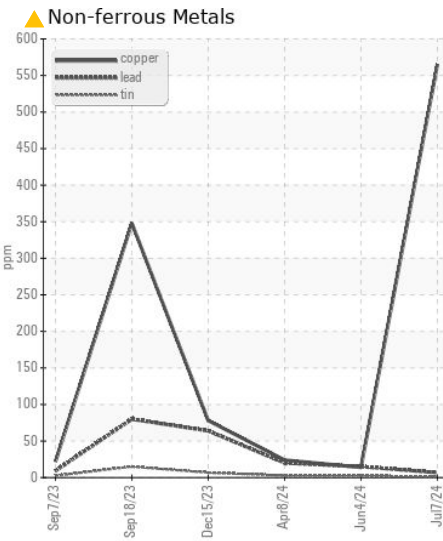
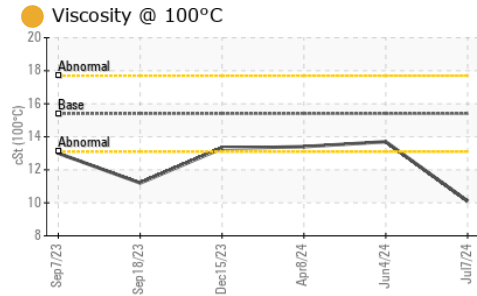
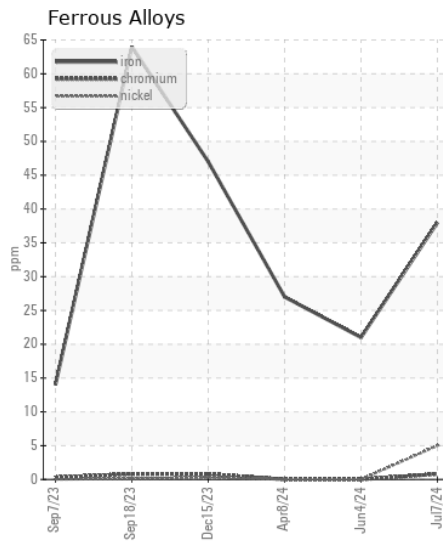
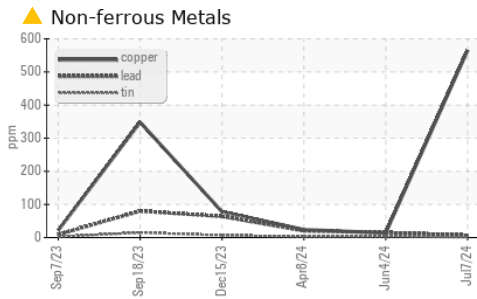
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	11	11	9
Potassium	ppm	ASTM D5185m	>20	2	4	3
Fuel	%	ASTM D3524	>2.1	0.3	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.4	10.0	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	24.9	26.7
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 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	6	5	4
Boron	ppm	ASTM D5185m		188	132	88
Barium	ppm	ASTM D5185m		<1	<1	<1
Molybdenum	ppm	ASTM D5185m		246	220	239
Manganese	ppm	ASTM D5185m		5	1	<1
Magnesium	ppm	ASTM D5185m		843	786	835
Calcium	ppm	ASTM D5185m		1601	1501	1607
Phosphorus	ppm	ASTM D5185m		912	1048	975
Zinc	ppm	ASTM D5185m		1060	1224	1222
Sulfur	ppm	ASTM D5185m		3264	3397	3459
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.3	21.1	24.0
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.3	7.4	7.3
Visc @ 100°C	cSt	ASTM D445	15.4	● 10.1	13.7	13.4



Certificate L2367

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

Sample No. : JR0220200

Lab Number : 06231276

Unique Number : 11114769

Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)

Received : 09 Jul 2024

Tested : 11 Jul 2024

Diagnosed : 11 Jul 2024 - Sean Felton

JRE - CHARLOTTE

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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)