



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
[W8026]
 Machine Id
JOHN DEERE 944K 1DW944KXAML703645
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. (Customer Sample Comment: W8026)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0183058	JR0175695	JR0163389
Sample Date		Client Info		02 Nov 2023	16 Jun 2023	29 Mar 2023
Machine Age	hrs	Client Info		4116	3021	2545
Oil Age	hrs	Client Info		1095	984	435
Filter Age	hrs	Client Info		1095	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	SEVERE

WEAR

Cylinder, crank, or cam shaft wear is indicated. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>51	🔴 212	10	32
Chromium	ppm	ASTM D5185m	>11	2	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	▲ 18	4	6
Lead	ppm	ASTM D5185m	>26	🔴 375	8	48
Copper	ppm	ASTM D5185m	>26	▲ 47	2	12
Tin	ppm	ASTM D5185m	>4	🔴 11	1	4
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

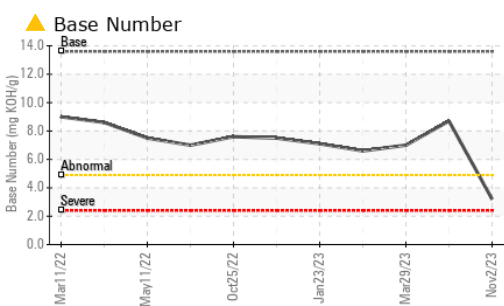
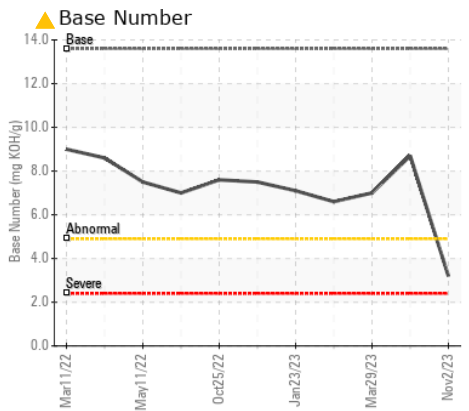
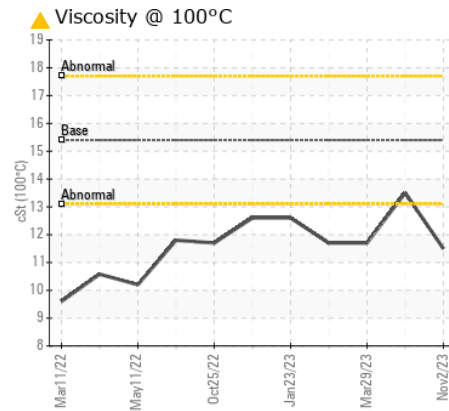
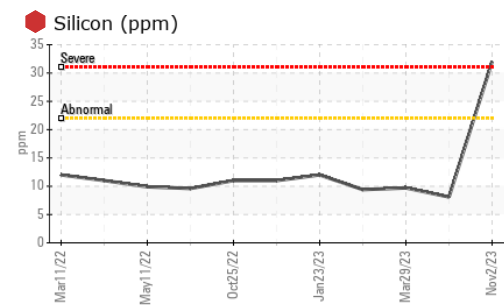
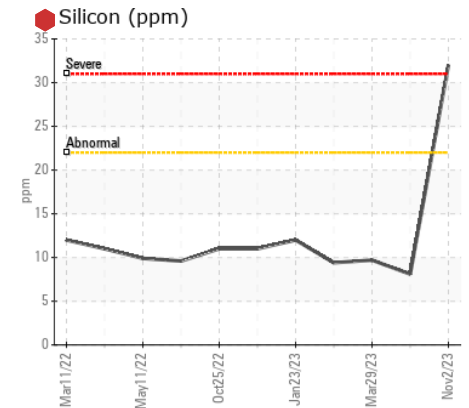
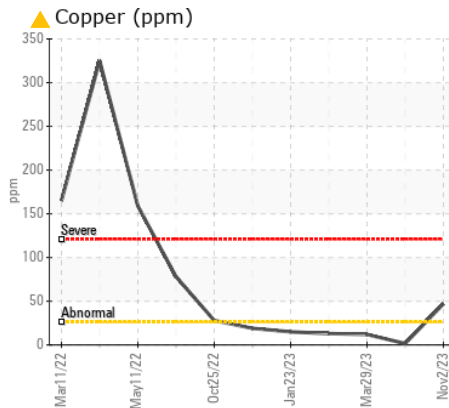
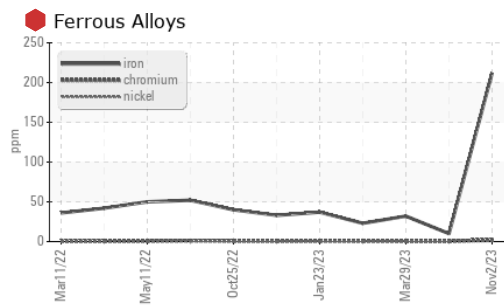
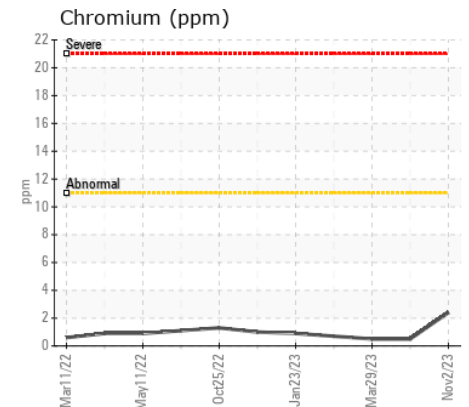
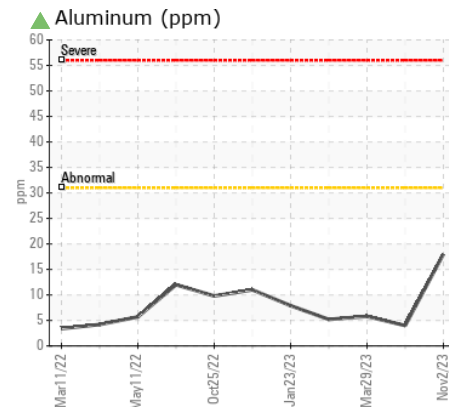
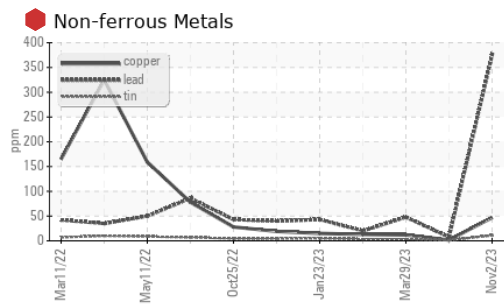
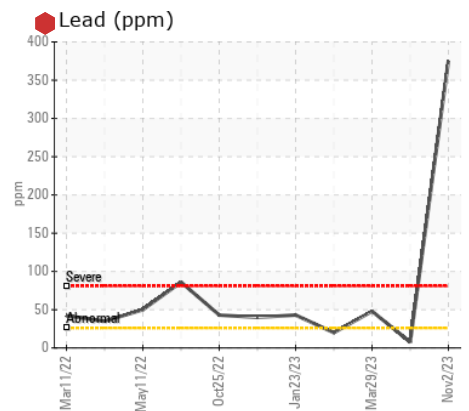
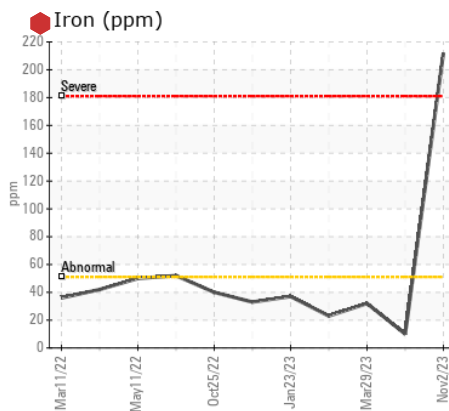
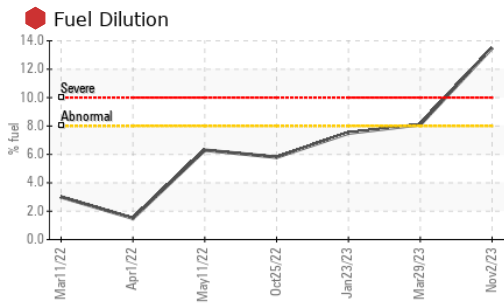
There is a high amount of fuel present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>22	🔴 32	8	10
Potassium	ppm	ASTM D5185m	>20	16	<1	9
Fuel	%	ASTM D3524	>8.0	🔴 13.5	<1.0	🔴 8.1
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	2.3	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	21.0	7.5	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	40.4	22.6	27.4
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

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>31	36	2	37
Boron	ppm	ASTM D5185m		20	211	24
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		220	245	249
Manganese	ppm	ASTM D5185m		8	<1	2
Magnesium	ppm	ASTM D5185m		900	868	762
Calcium	ppm	ASTM D5185m		1424	1466	1414
Phosphorus	ppm	ASTM D5185m		889	879	769
Zinc	ppm	ASTM D5185m		1238	1080	998
Sulfur	ppm	ASTM D5185m		2764	3744	2893
Oxidation	Abs/.1mm	*ASTM D7414	>25	46.4	17.6	22.8
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	▲ 3.2	8.7	7.0
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.5	13.5	▲ 11.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0183058 **Received** : 06 Nov 2023
Lab Number : 05998882 **Diagnosed** : 08 Nov 2023
Unique Number : 10727242 **Diagnostician** : Jonathan Hester
Test Package : MOBCE (Additional Tests: FuelDilution, PercentFuel, TBN)

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Certificate L2367
 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)