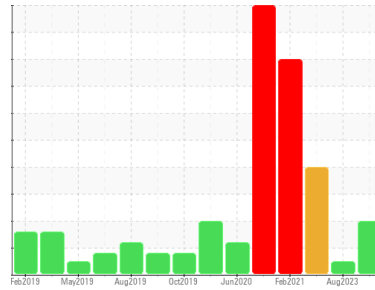
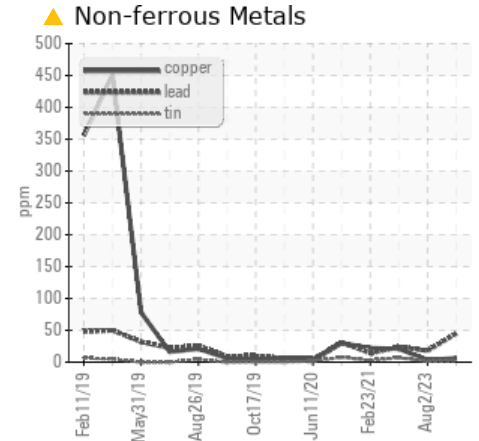
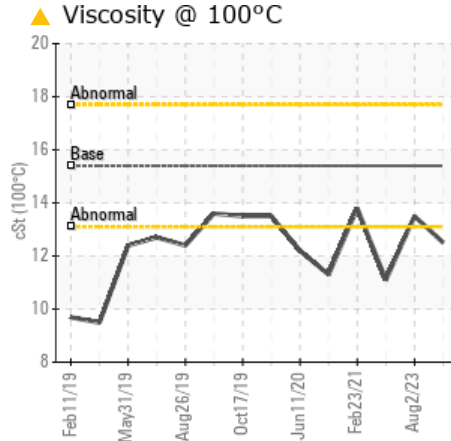
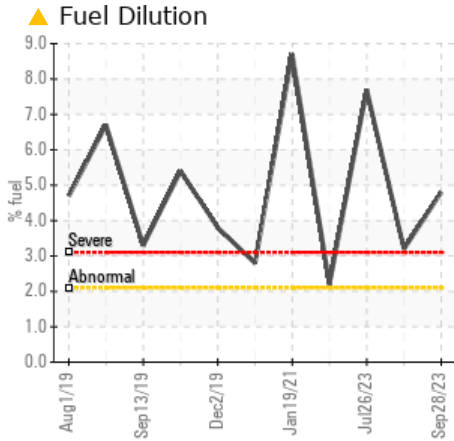


Area
POWHATAN
 Machine Id
JOHN DEERE 944K M02-0898 - INVERTER 1DW944KXAJE688399
 Component
Diesel Engine
 Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 GAL)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	SEVERE
Lead	ppm	ASTM D5185m	>26	▲ 45	18	24
Fuel	%	ASTM D3524	>2.1	▲ 4.8	3.2	● 7.7
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.5	13.5	▲ 11.1

Customer Id: LUCMIL
 Sample No.: JR0165532
 Lab Number: 05968686
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

02 Aug 2023 Diag: Wes Davis

NORMAL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



26 Jul 2023 Diag: Don Baldrige

FUEL



We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The iron level is abnormal. The tin level is abnormal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report



23 Feb 2021 Diag: Jonathan Hester

DIRT

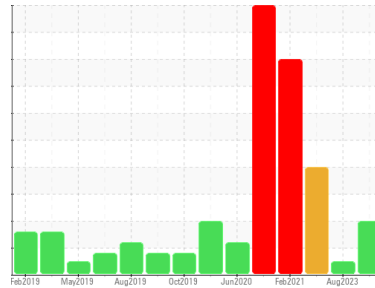


We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels remain high. Elemental level of silicon (Si) above normal indicating ingress of seal material. Light fuel dilution occurring. 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.

view report



OIL ANALYSIS REPORT

Sample Rating Trend

WEAR


Area
POWHATAN
Machine Id
JOHN DEERE 944K M02-0898 - INVERTER 1DW944KXAJE688399
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (12 GAL)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			JR0165532	JR0166080	JR0164279
Sample Date	Client Info			28 Sep 2023	02 Aug 2023	26 Jul 2023
Machine Age	hrs	Client Info		8559	8273	8213
Oil Age	hrs	Client Info		346	26	0
Oil Changed	Client Info			Not Chngd	Not Chngd	Changed
Sample Status				ABNORMAL	NORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	41	28	▲ 110
Chromium	ppm	ASTM D5185m	>11	<1	<1	2
Nickel	ppm	ASTM D5185m	>5	<1	0	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	7	2	10
Lead	ppm	ASTM D5185m	>26	▲ 45	18	24
Copper	ppm	ASTM D5185m	>26	6	4	21
Tin	ppm	ASTM D5185m	>4	2	1	▲ 7
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		149	251	15
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		218	219	59
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m		882	840	1027
Calcium	ppm	ASTM D5185m		1328	1400	982
Phosphorus	ppm	ASTM D5185m		934	889	955
Zinc	ppm	ASTM D5185m		1131	1095	1235
Sulfur	ppm	ASTM D5185m		3226	3768	3390

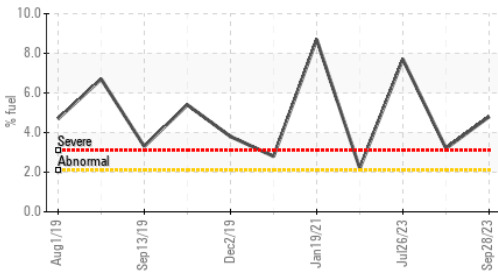
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	10	8	22
Sodium	ppm	ASTM D5185m	>31	3	3	7
Potassium	ppm	ASTM D5185m	>20	4	2	2
Fuel	%	ASTM D3524	>2.1	▲ 4.8	3.2	◆ 7.7

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1.2	0.4	2.5
Nitration	Abs/cm	*ASTM D7624	>20	10.0	7.2	14.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	19.7	27.2

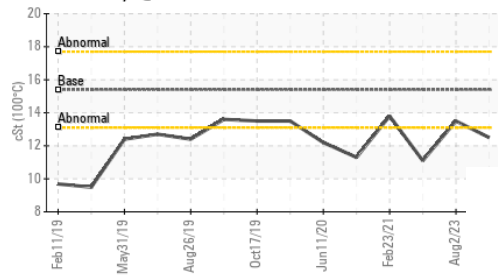
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	14.6	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.4	9.5	6.7

OIL ANALYSIS REPORT

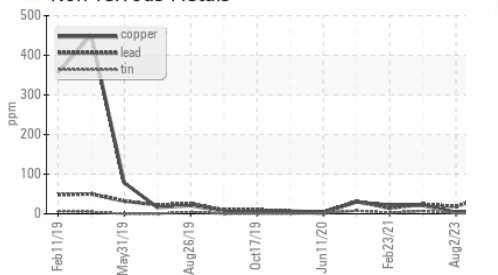
▲ Fuel Dilution



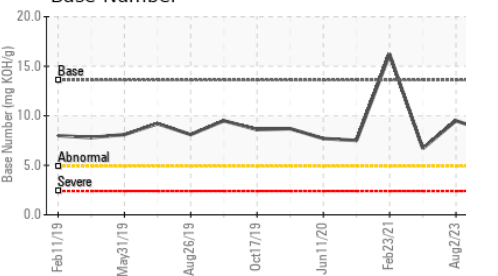
▲ Viscosity @ 100°C



▲ Non-ferrous Metals



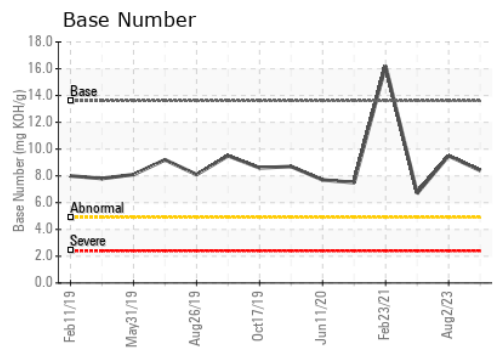
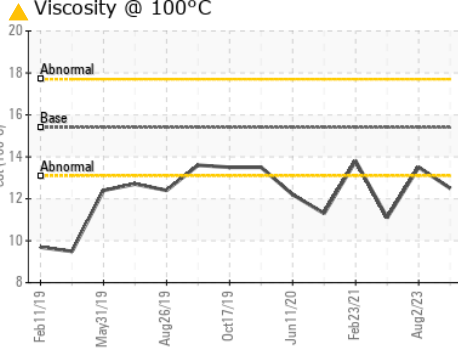
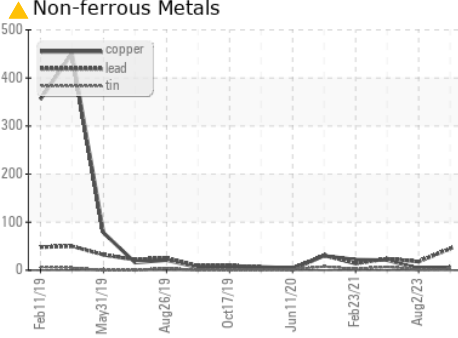
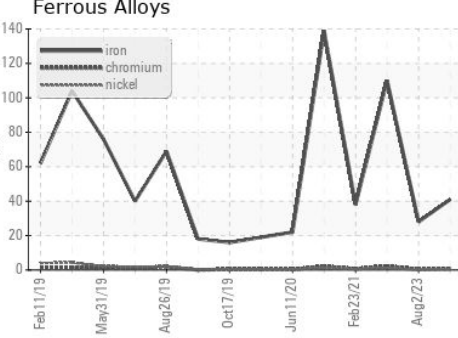
Base Number



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 12.5	13.5	▲ 11.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0165532 **Received** : 04 Oct 2023
Lab Number : 05968686 **Diagnosed** : 06 Oct 2023
Unique Number : 10675237 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)
 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)

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