James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 300G 1FF300GXLMF731759
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

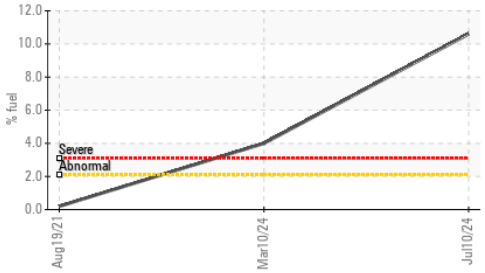
There is a high amount of fuel present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

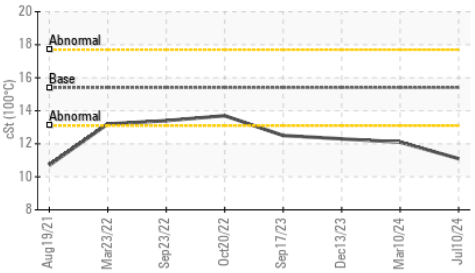
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0223613	JR0204745	JR0194260
Sample Date		Client Info		10 Jul 2024	10 Mar 2024	13 Dec 2023
Machine Age	hrs	Client Info		3477	2972	2626
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	26	17	13
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>31	3	4	2
Lead	ppm	ASTM D5185m	>26	<1	<1	0
Copper	ppm	ASTM D5185m	>26	3	3	2
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	▲ 27	▲ 23	20
Potassium	ppm	ASTM D5185m	>20	1	3	0
Fuel	%	ASTM D3524	>2.1	▲ 10.6	▲ 4.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.7	9.7	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.8	22.9	21.9
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
Sodium	ppm	ASTM D5185m	>31	6	2	1
Boron	ppm	ASTM D5185m		34	148	134
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		227	252	173
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		742	766	713
Calcium	ppm	ASTM D5185m		1380	1371	1432
Phosphorus	ppm	ASTM D5185m		792	853	874
Zinc	ppm	ASTM D5185m		932	992	1081
Sulfur	ppm	ASTM D5185m		2705	2702	2817
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.1	18.7	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	6.7	7.8	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.1	▲ 12.1	12.3

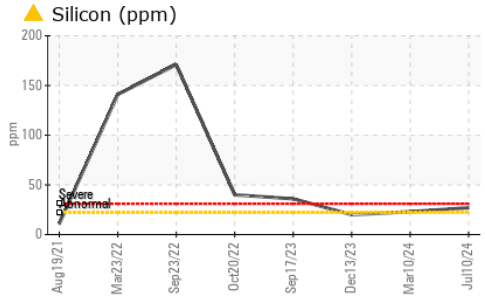
Fuel Dilution



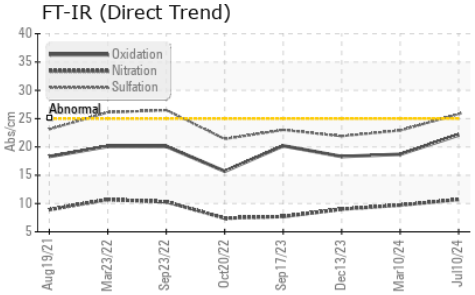
Viscosity @ 100°C



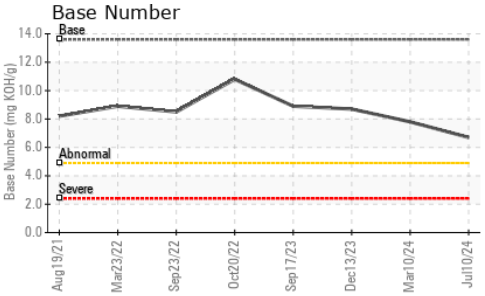
Silicon (ppm)



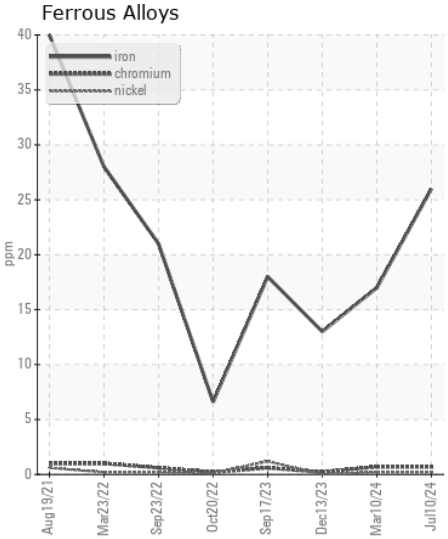
FT-IR (Direct Trend)



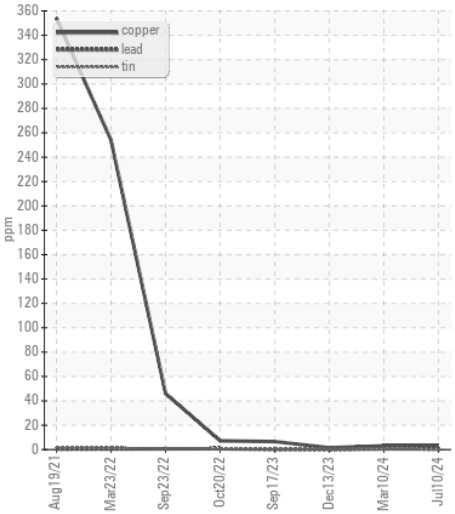
Base Number



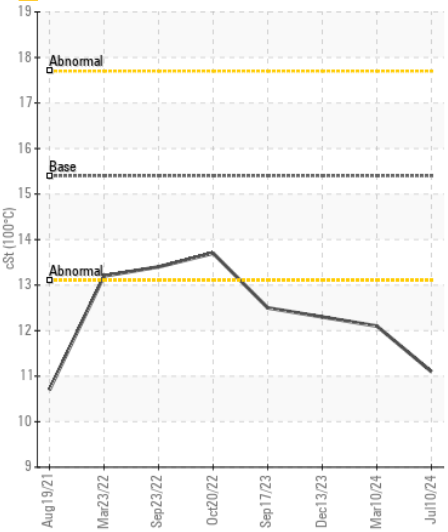
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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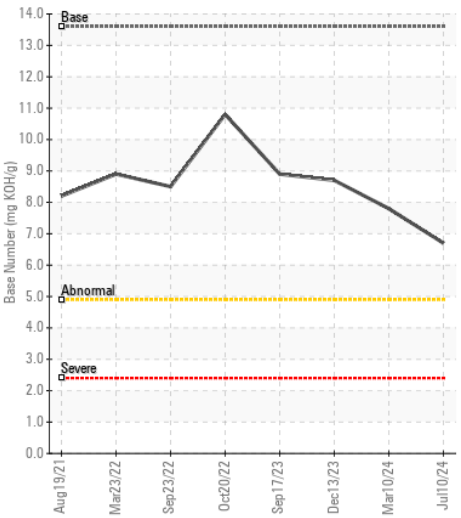

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0223613
Lab Number : 06233102
Unique Number : 11116595
Test Package : CONST (Additional Tests: PercentFuel, TBN)

Received : 11 Jul 2024
Tested : 16 Jul 2024
Diagnosed : 16 Jul 2024 - Jonathan Hester

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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