James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
[W20635-WINDY HILL]
Machine Id
JOHN DEERE S780 1H0S780SKKT805788
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 from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

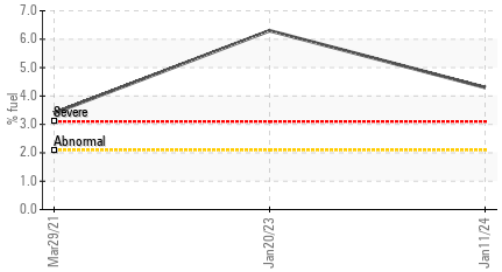
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

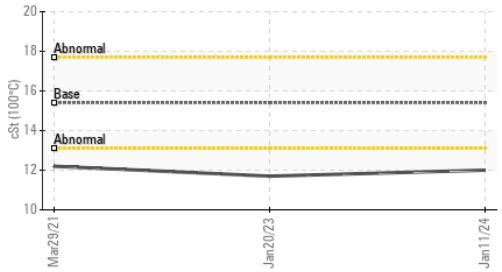
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0196650	JR0159101	JR0082087
Sample Date		Client Info		11 Jan 2024	20 Jan 2023	29 Mar 2021
Machine Age	hrs	Client Info		978	968	554
Oil Age	hrs	Client Info		400	0	200
Filter Age	hrs	Client Info		400	0	200
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	73	38	39
Chromium	ppm	ASTM D5185m	>11	<1	1	<1
Nickel	ppm	ASTM D5185m	>5	1	3	1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>31	4	5	2
Lead	ppm	ASTM D5185m	>26	8	24	13
Copper	ppm	ASTM D5185m	>26	31	▲ 60	▲ 231
Tin	ppm	ASTM D5185m	>4	2	5	6
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	7	7	4
Potassium	ppm	ASTM D5185m	>20	0	10	3
Fuel	%	ASTM D3524	>2.1	⬢ 4.3	▲ 6.3	▲ 3.4
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.1	12.6	13.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	24.8	27.2
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	5	6	3
Boron	ppm	ASTM D5185m		106	30	76
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		252	195	275
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m		823	726	836
Calcium	ppm	ASTM D5185m		1441	1081	1508
Phosphorus	ppm	ASTM D5185m		797	716	898
Zinc	ppm	ASTM D5185m		987	857	1033
Sulfur	ppm	ASTM D5185m		2752	2613	2466
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.7	20.2	23.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.2	7.1	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.0	▲ 11.7	▲ 12.2

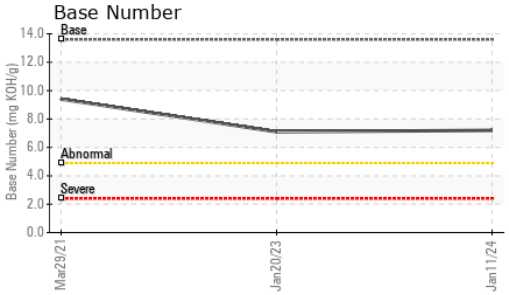
Fuel Dilution



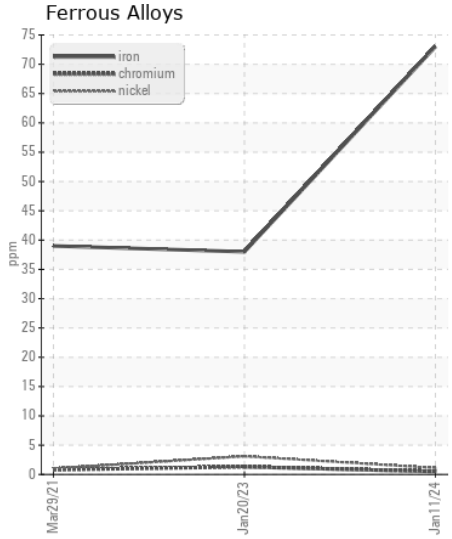
Viscosity @ 100°C



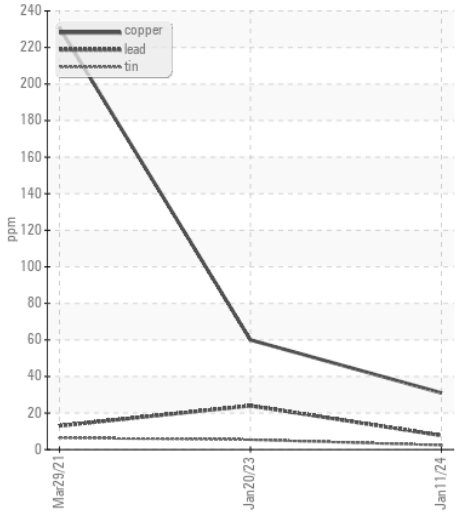
Base Number



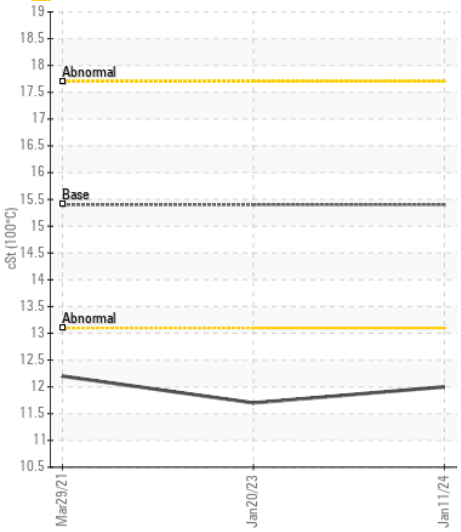
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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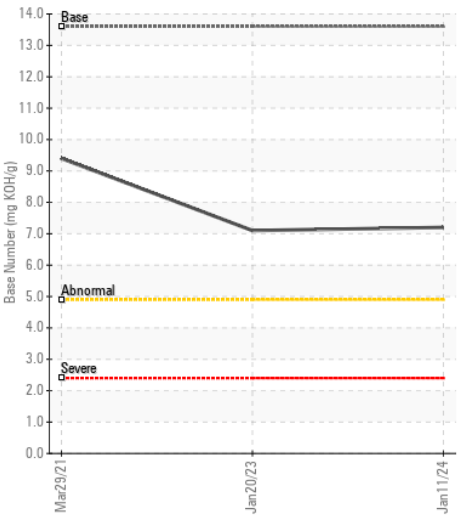

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0196650 **Recieved** : 12 Jan 2024
Lab Number : 06060032 **Diagnosed** : 16 Jan 2024
Unique Number : 10831414 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: 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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