James River Equipment

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 317G 1T0317GJHKJ352212
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

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

CONTAMINATION

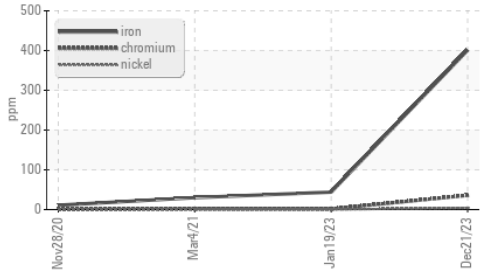
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

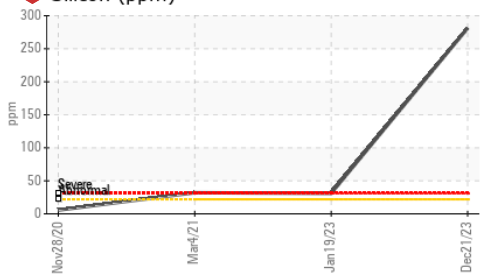
The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0194342	JR0138500	JR0079773
Sample Date		Client Info		21 Dec 2023	19 Jan 2023	04 Mar 2021
Machine Age	hrs	Client Info		1406	1096	492
Oil Age	hrs	Client Info		0	0	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				SEVERE	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>51	⬢ 401	44	30
Chromium	ppm	ASTM D5185m	>11	⬢ 36	2	2
Nickel	ppm	ASTM D5185m	>5	4	<1	<1
Titanium	ppm	ASTM D5185m		5	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>31	▲ 100	▲ 24	17
Lead	ppm	ASTM D5185m	>26	5	<1	<1
Copper	ppm	ASTM D5185m	>26	▲ 42	10	25
Tin	ppm	ASTM D5185m	>4	▲ 5	0	<1
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	⬢ 281	▲ 31	32
Potassium	ppm	ASTM D5185m	>20	5	0	2
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.7	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.3	10.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	24.7	22.8
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	<1	3
Boron	ppm	ASTM D5185m		183	152	244
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		241	242	249
Manganese	ppm	ASTM D5185m		5	<1	<1
Magnesium	ppm	ASTM D5185m		863	780	785
Calcium	ppm	ASTM D5185m		1456	1458	1538
Phosphorus	ppm	ASTM D5185m		910	737	903
Zinc	ppm	ASTM D5185m		1088	917	1046
Sulfur	ppm	ASTM D5185m		2945	3260	2860
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	19.5	17.4
Base Number (BN)	mg KOH/g	ASTM D2896		8.3	8.4	9.3
Visc @ 100°C	cSt	ASTM D445		14.3	13.9	13.5

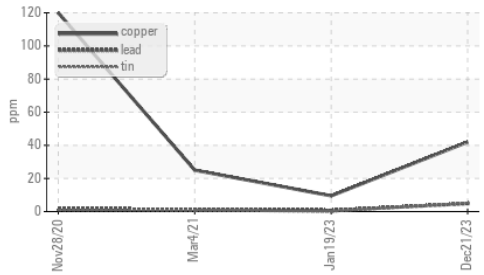
Ferrous Alloys



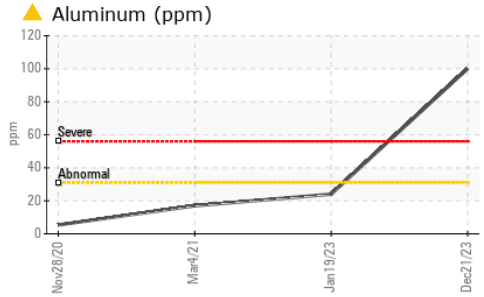
Silicon (ppm)



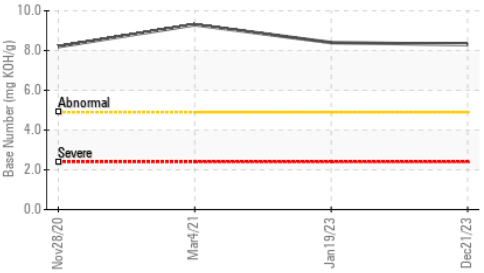
Non-ferrous Metals



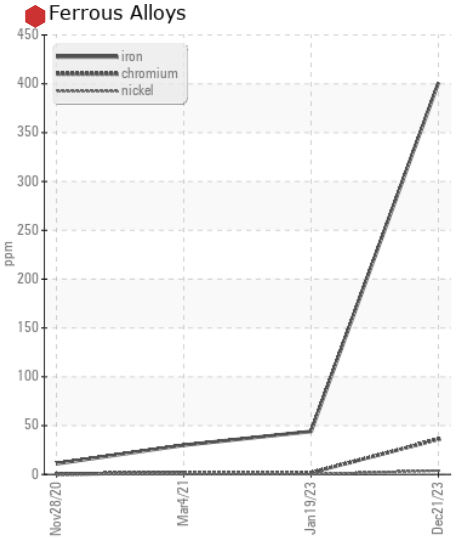
Aluminum (ppm)



Base Number



Ferrous Alloys



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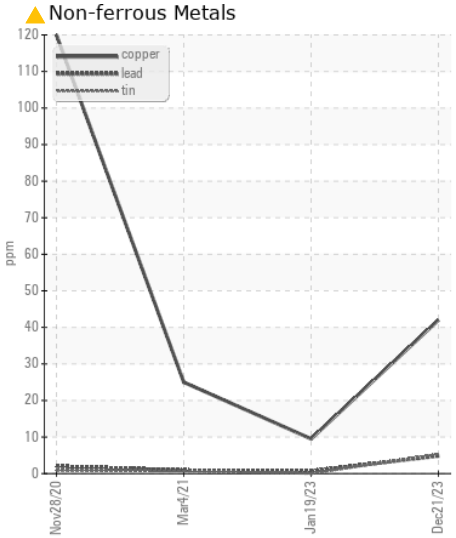
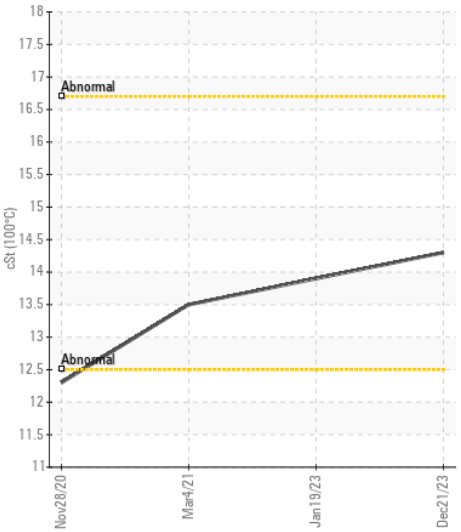


Viscosity @ 100°C



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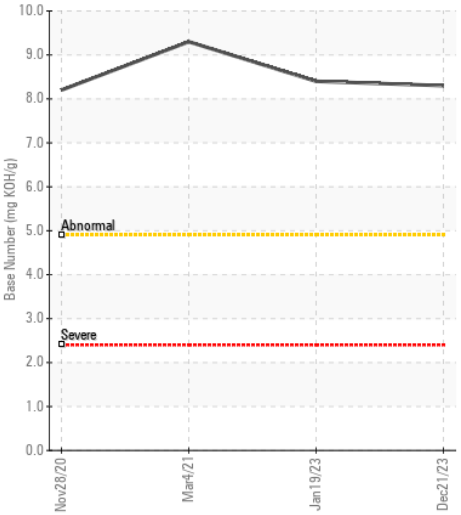

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0194342 **Received** : 22 Dec 2023
Lab Number : 06042957 **Tested** : 26 Dec 2023
Unique Number : 10803565 **Diagnosed** : 26 Dec 2023 - Don Baldridge
Test Package : CONST (Additional Tests: 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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