James River Equipment

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE 331G 1T0331GKPFJ338317 (S/N 1T0331GKPJF338317)
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

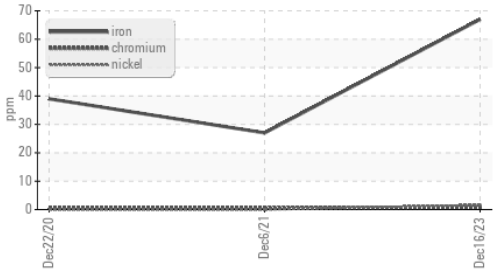
Elemental level of silicon (Si) above normal.

FLUID CONDITION

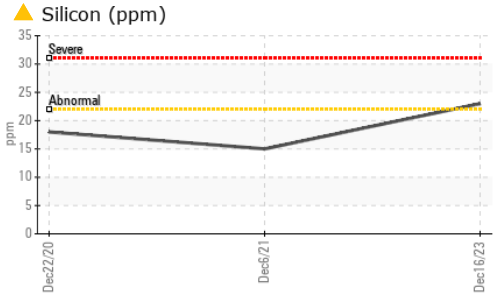
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0189358	JR0102287	JR0072190
Sample Date		Client Info		16 Dec 2023	06 Dec 2021	22 Dec 2020
Machine Age	hrs	Client Info		2073	1422	1173
Oil Age	hrs	Client Info		651	422	0
Filter Age	hrs	Client Info		0	422	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	▲ 67	27	39
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>31	9	3	1
Lead	ppm	ASTM D5185m	>26	1	<1	<1
Copper	ppm	ASTM D5185m	>26	16	▲ 32	▲ 39
Tin	ppm	ASTM D5185m	>4	<1	<1	<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	▲ 23	15	18
Potassium	ppm	ASTM D5185m	>20	1	<1	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	1	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	13.2	10	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.2	24	20.3
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	1	2	4
Boron	ppm	ASTM D5185m		38	165	107
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		213	239	278
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		832	821	877
Calcium	ppm	ASTM D5185m		1625	1636	1526
Phosphorus	ppm	ASTM D5185m		1017	955	935
Zinc	ppm	ASTM D5185m		1313	1100	1120
Sulfur	ppm	ASTM D5185m		3198	2651	2358
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.4	19.2	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.9	9.2	9.5
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.2	14.3

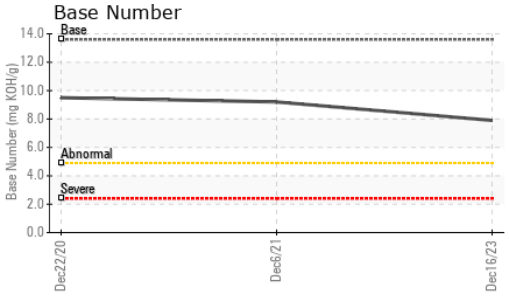
Ferrous Alloys



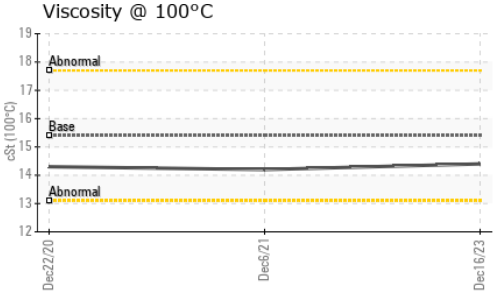
Silicon (ppm)



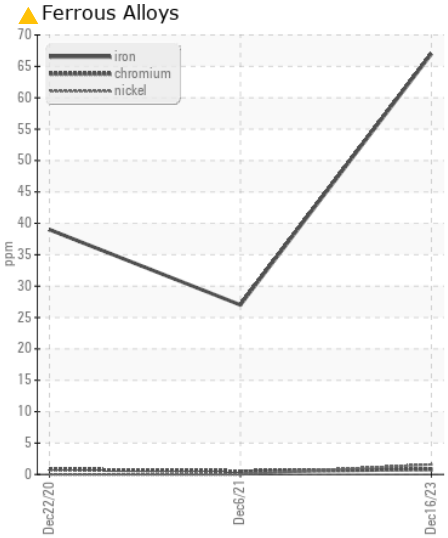
Base Number



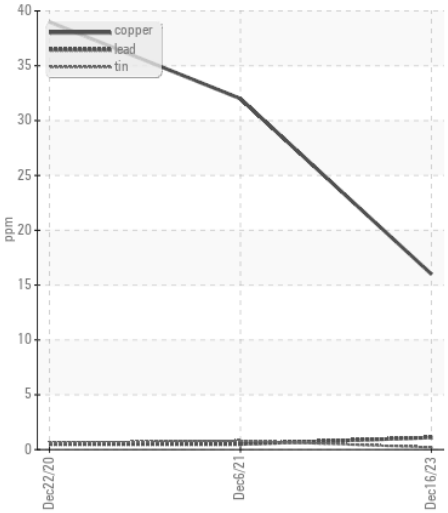
Viscosity @ 100°C



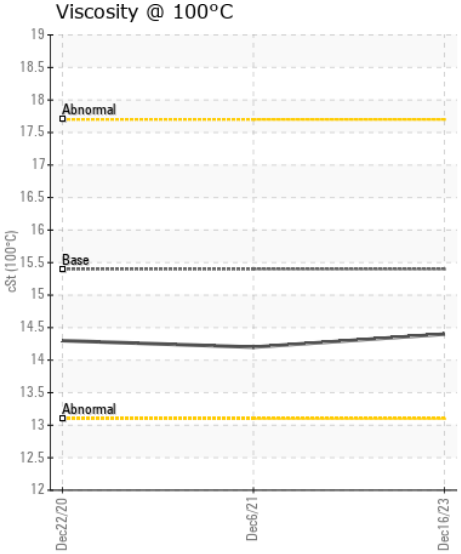
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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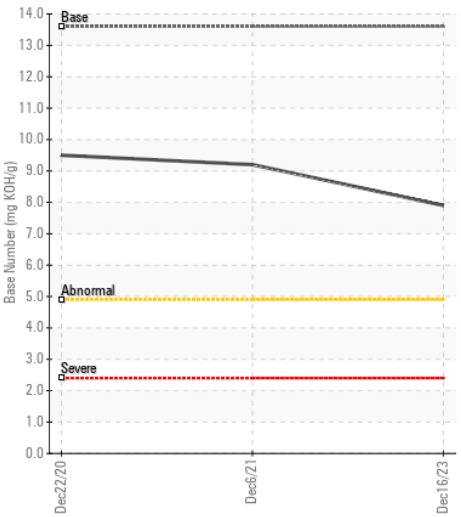

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0189358 **Recieved** : 12 Jan 2024
Lab Number : 06059101 **Diagnosed** : 15 Jan 2024
Unique Number : 10830483 **Diagnostician** : 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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