CONST

James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 310E 1DW310EXKJF692444
Component
Diesel Engine
Fluid
MOBIL 15W30 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

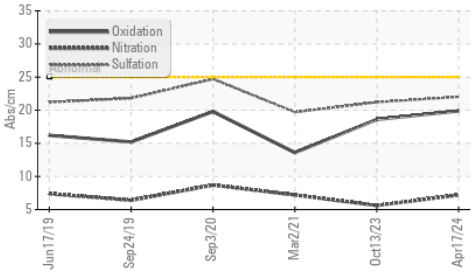
Sodium and/or potassium levels are high.

FLUID CONDITION

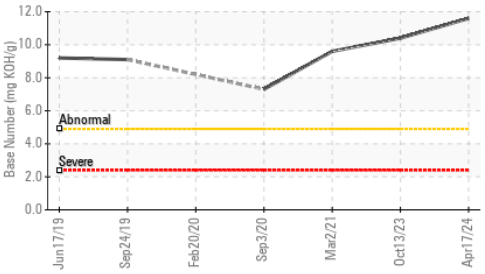
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0138429	JR0138476	JRMC411657
Sample Date		Client Info		17 Apr 2024	13 Oct 2023	02 Mar 2021
Machine Age	hrs	Client Info		5691	5162	2564
Oil Age	hrs	Client Info		0	762	0
Filter Age	hrs	Client Info		0	762	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ATTENTION	ATTENTION
Iron	ppm	ASTM D5185m	>51	20	24	17
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	3	4	4
Lead	ppm	ASTM D5185m	>26	0	<1	<1
Copper	ppm	ASTM D5185m	>26	9	4	10
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	14	4	5
Potassium	ppm	ASTM D5185m	>20	▲ 43	2	3
Fuel		WC Method	>2.1	<1.0	0.2	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.2	5.6	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	21.2	19.7
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	▲ 362	<1	● 62
Boron	ppm	ASTM D5185m		34	54	80
Barium	ppm	ASTM D5185m		0	10	0
Molybdenum	ppm	ASTM D5185m		51	42	63
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		507	447	766
Calcium	ppm	ASTM D5185m		1809	1666	1458
Phosphorus	ppm	ASTM D5185m		799	756	836
Zinc	ppm	ASTM D5185m		959	900	882
Sulfur	ppm	ASTM D5185m		3041	2883	2421
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	18.6	13.6
Base Number (BN)	mg KOH/g	ASTM D2896		11.6	● 10.4	9.6
Visc @ 100°C	cSt	ASTM D445		12.2	12.2	13.0

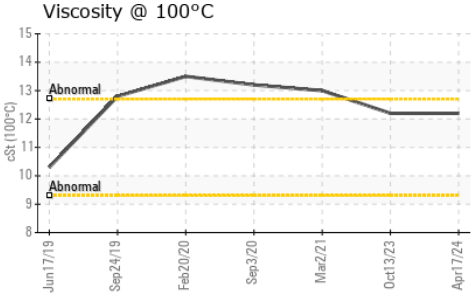
FT-IR (Direct Trend)



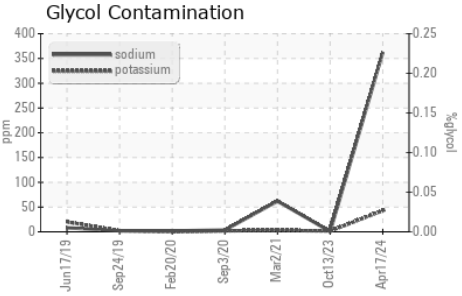
Base Number



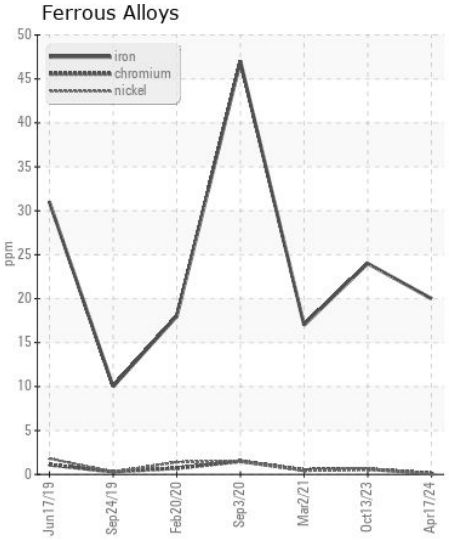
Viscosity @ 100°C



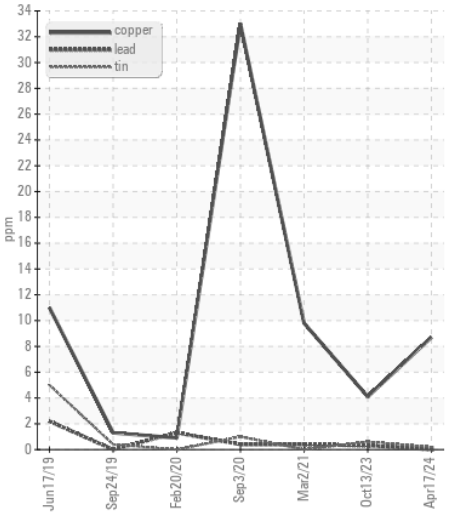
Glycol Contamination



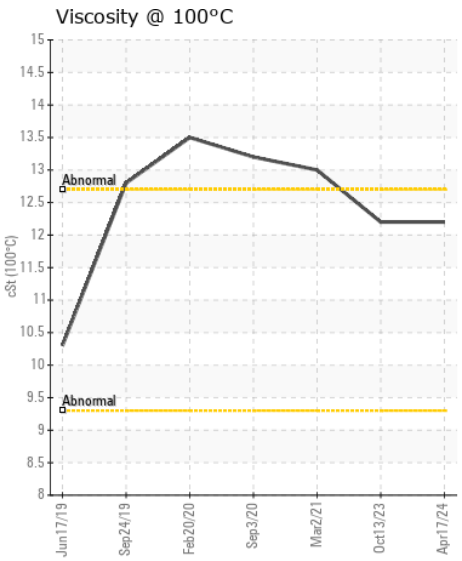
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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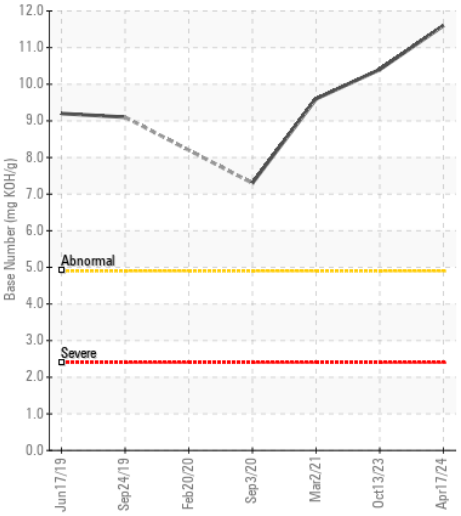

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0138429
Lab Number : 06158864
Unique Number : 10994287
Test Package : CONST (Additional Tests: Glycol, TBN)

Received : 24 Apr 2024
Tested : 26 Apr 2024
Diagnosed : 26 Apr 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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