James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
JOHN DEERE 317 T00317A103429
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. The oil 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

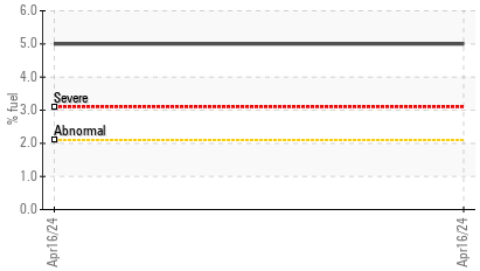
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

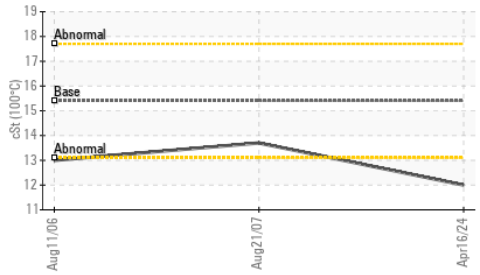
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0206636	JRMC005490	JRMC002978
Sample Date		Client Info		16 Apr 2024	21 Aug 2007	11 Aug 2006
Machine Age	hrs	Client Info		2714	550	185
Oil Age	hrs	Client Info		2714	550	85
Filter Age	hrs	Client Info		0	0	85
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	5	10	16
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	3	5	5
Lead	ppm	ASTM D5185m	>26	1	1	1
Copper	ppm	ASTM D5185m	>26	2	2	4
Tin	ppm	ASTM D5185m	>4	1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>22	10	▲ 61	▲ 105
Potassium	ppm	ASTM D5185m	>20	3	8	4
Fuel	%	ASTM D3524	>2.1	▲ 5.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	6.8	7.	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	17.	18.
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	5	7
Boron	ppm	ASTM D5185m		361	125	117
Barium	ppm	ASTM D5185m		0	4	0
Molybdenum	ppm	ASTM D5185m		98	91	94
Manganese	ppm	ASTM D5185m		1	1	1
Magnesium	ppm	ASTM D5185m		501	15	9
Calcium	ppm	ASTM D5185m		1530	3245	3467
Phosphorus	ppm	ASTM D5185m		779	1220	1239
Zinc	ppm	ASTM D5185m		861	1299	1404
Sulfur	ppm	ASTM D5185m		2826	4368	4415
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	14.	12.
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.2	9.56	11.89
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.0	13.7	13.00

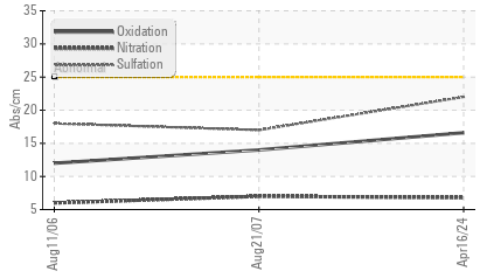
Fuel Dilution



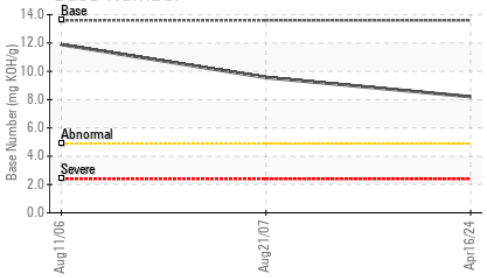
Viscosity @ 100°C



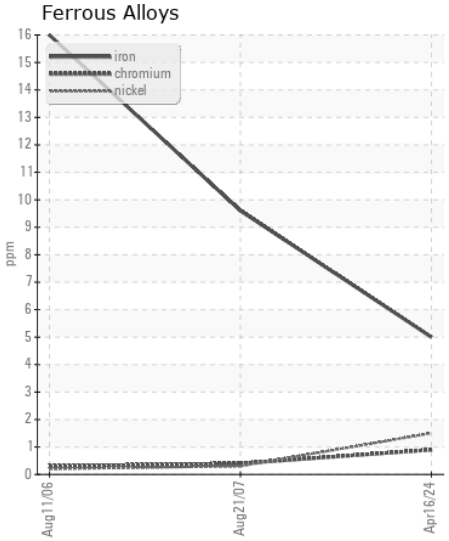
FT-IR (Direct Trend)



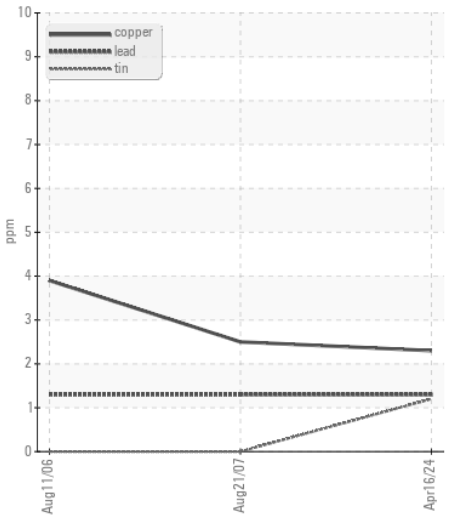
Base Number



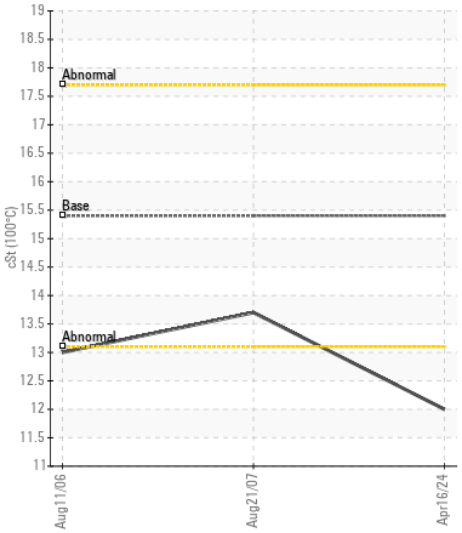
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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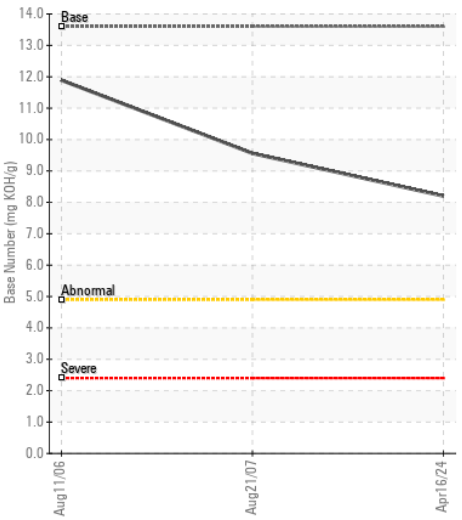

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0206636
Lab Number : 06152891
Unique Number : 10982969
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 18 Apr 2024
Tested : 22 Apr 2024
Diagnosed : 22 Apr 2024 - Wes Davis

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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