MOB

James River Equipment

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
GOOSE CREEK [W32683]
Machine Id
JOHN DEERE 410E M01-3324 1DW410ETELF697917
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

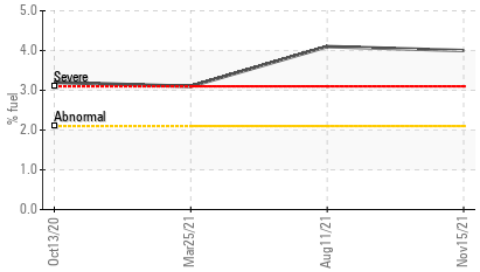
There is a moderate amount of fuel present in the oil.

FLUID CONDITION

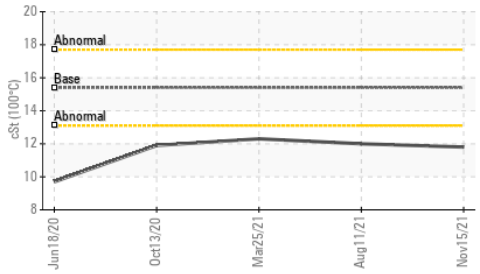
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0107353	JR0088597	JR0067805
Sample Date		Client Info		15 Nov 2021	11 Aug 2021	25 Mar 2021
Machine Age	hrs	Client Info		2481	1967	1467
Oil Age	hrs	Client Info		0	0	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>51	14	12	15
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		<1	0	<1
Aluminum	ppm	ASTM D5185m	>31	<1	1	4
Lead	ppm	ASTM D5185m	>26	5	10	10
Copper	ppm	ASTM D5185m	>26	11	13	19
Tin	ppm	ASTM D5185m	>4	2	3	4
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	4	3	2
Potassium	ppm	ASTM D5185m	>20	1	2	5
Fuel	%	ASTM D3524	>2.1	▲ 4.0	▲ 4.1	▲ 3.1
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.4	9.9	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	23.2	27
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	3	9	11
Boron	ppm	ASTM D5185m		142	117	60
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		242	279	234
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		787	827	842
Calcium	ppm	ASTM D5185m		1463	1461	1452
Phosphorus	ppm	ASTM D5185m		848	807	834
Zinc	ppm	ASTM D5185m		936	959	1045
Sulfur	ppm	ASTM D5185m		2530	2644	2579
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	17.5	21
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.4	7.4	7.6
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.8	▲ 12.0	▲ 12.3

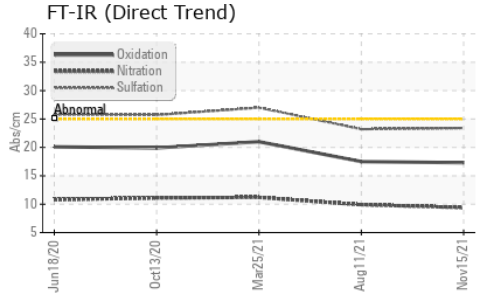
Fuel Dilution



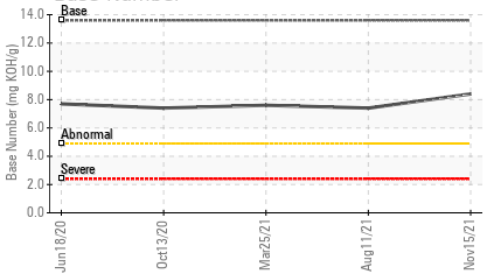
Viscosity @ 100°C



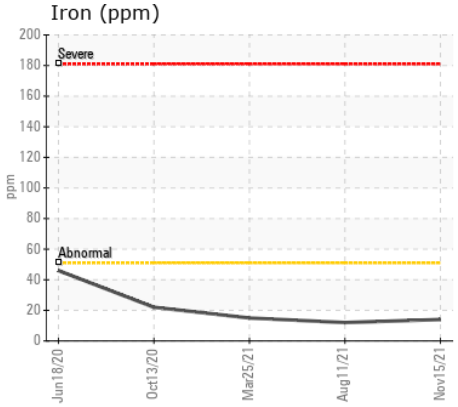
FT-IR (Direct Trend)



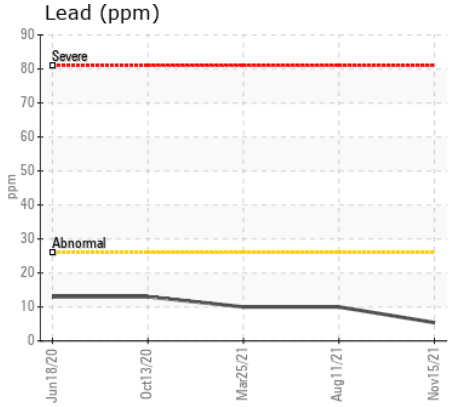
Base Number



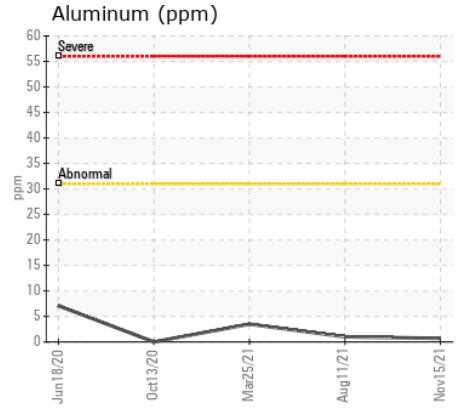
Iron (ppm)



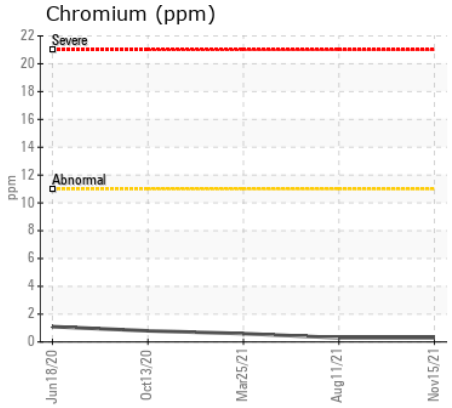
Lead (ppm)



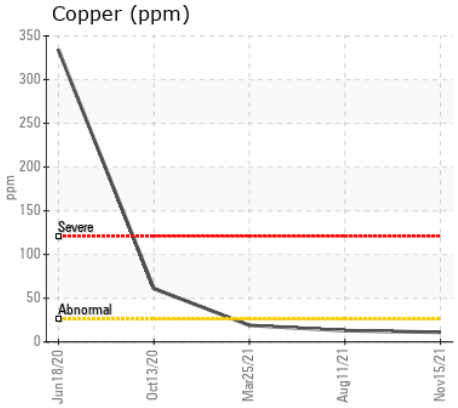
Aluminum (ppm)



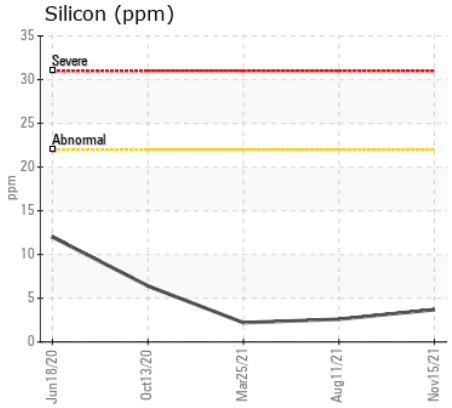
Chromium (ppm)



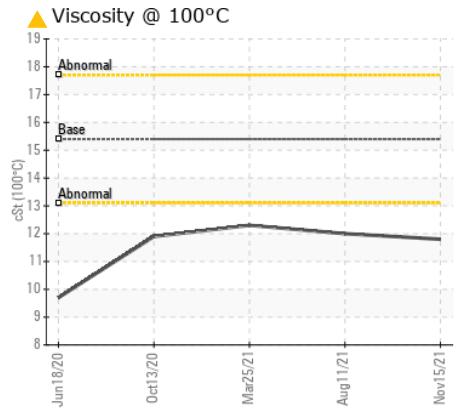
Copper (ppm)



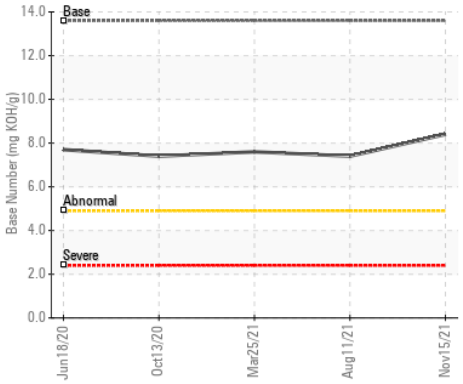
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0107353
Lab Number : 05408860
Unique Number : 9753023
Test Package : MOBCE (Additional Tests: PercentFuel, TBN)
Received : 24 Nov 2021
Tested : 30 Nov 2021
Diagnosed : 30 Nov 2021 - Jonathan Hester

Certificate L2367

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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