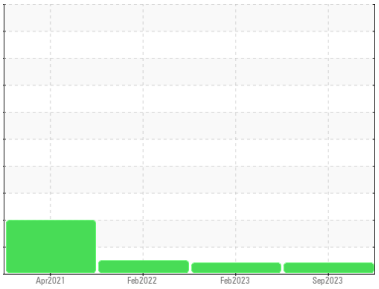
PROBLEM SUMMARY

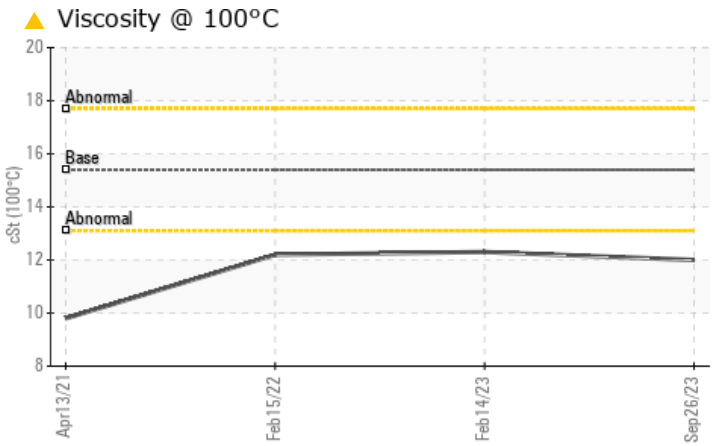
Area
[W46858]
Machine Id
JOHN DEERE 410E 1DW410EBAMF709228
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ATTENTION	NORMAL
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **12.0**	▲ 12.3	12.2

Customer Id: JAMASH
Sample No.: JR0179214
Lab Number: 05967594
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

14 Feb 2023 Diag: Jonathan Hester

VISCOSITY

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

15 Feb 2022 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

13 Apr 2021 Diag: Jonathan Hester

WEAR

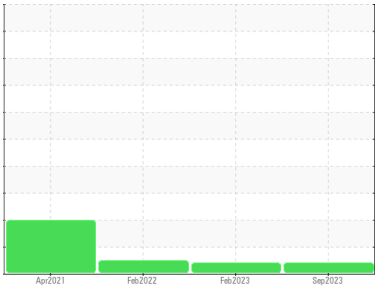
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. Light fuel dilution occurring. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

JAMES RIVER EQUIPMENT

Sample Rating Trend



VISCOSITY

Area
[W46858]
Machine Id
JOHN DEERE 410E 1DW410EBAMF709228
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

DIAGNOSIS

Recommendation
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 no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**JR0179214**	JR0147940	JR0084913
Sample Date		Client Info		**26 Sep 2023**	14 Feb 2023	15 Feb 2022
Machine Age	hrs	Client Info		**4970**	4465	2380
Oil Age	hrs	Client Info		**0**	0	861
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ATTENTION**	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	**15**	23	22
Chromium	ppm	ASTM D5185m	>11	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**4**	6	<1
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>31	**3**	5	7
Lead	ppm	ASTM D5185m	>26	**5**	12	<1
Copper	ppm	ASTM D5185m	>26	**6**	10	1
Tin	ppm	ASTM D5185m	>4	**2**	3	<1
Antimony	ppm	ASTM D5185m		**---**	---	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**146**	101	23
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**240**	230	31
Manganese	ppm	ASTM D5185m		**1**	1	<1
Magnesium	ppm	ASTM D5185m		**804**	777	176
Calcium	ppm	ASTM D5185m		**1408**	1376	2528
Phosphorus	ppm	ASTM D5185m		**799**	757	1069
Zinc	ppm	ASTM D5185m		**1002**	994	1257
Sulfur	ppm	ASTM D5185m		**2992**	3353	3185

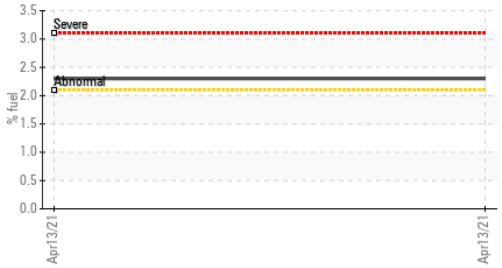
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	**8**	6	5
Sodium	ppm	ASTM D5185m	>31	**4**	4	2
Potassium	ppm	ASTM D5185m	>20	**0**	1	7
Fuel	%	ASTM D3524	>2.1	**<1.0**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**9.6**	10.7	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.5**	24.8	27.3

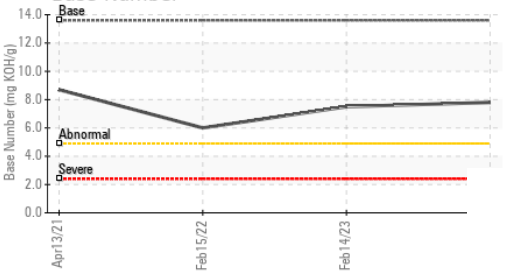
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.6**	20.2	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	**7.8**	7.5	6.0

OIL ANALYSIS REPORT

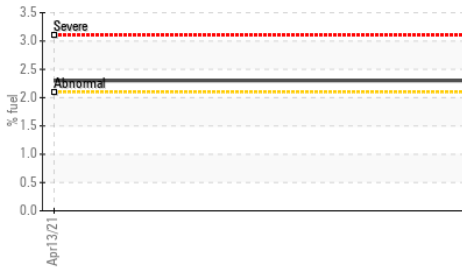
Fuel Dilution



Base Number



Fuel Dilution

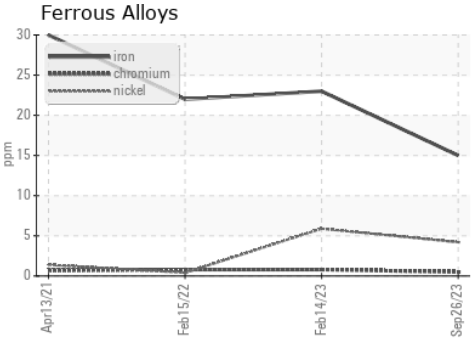


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

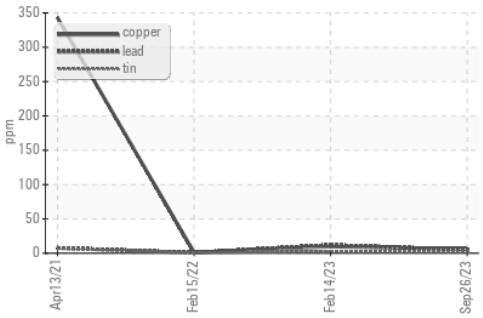
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **12.0**	▲ 12.3	12.2

GRAPHS

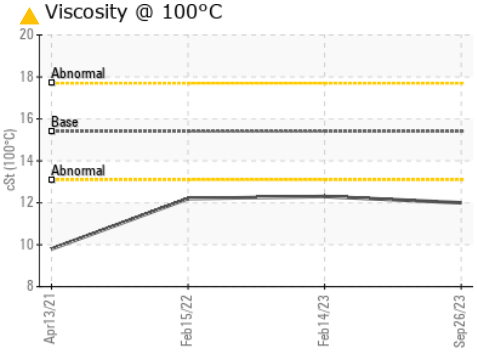
Ferrous Alloys



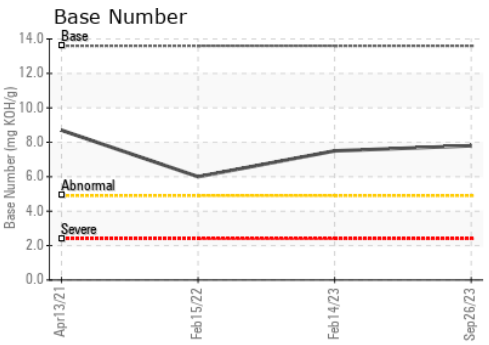
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0179214 **Received** : 03 Oct 2023
Lab Number : 05967594 **Diagnosed** : 05 Oct 2023
Unique Number : 10674145 **Diagnostician** : Don Baldridge
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, 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)

JRE - ASHLAND
11047 LEADBETTER RD
ASHLAND, VA
US 23005
Contact: DAVID ZIEG
dzieg@jamesriverequipment.com
T: (804)798-6001
F: (804)798-0292