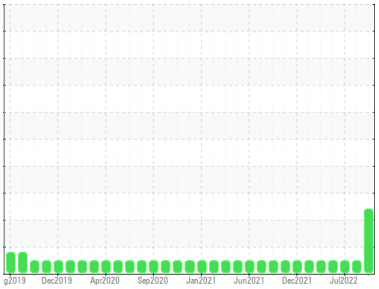
PROBLEM SUMMARY

Sample Rating Trend

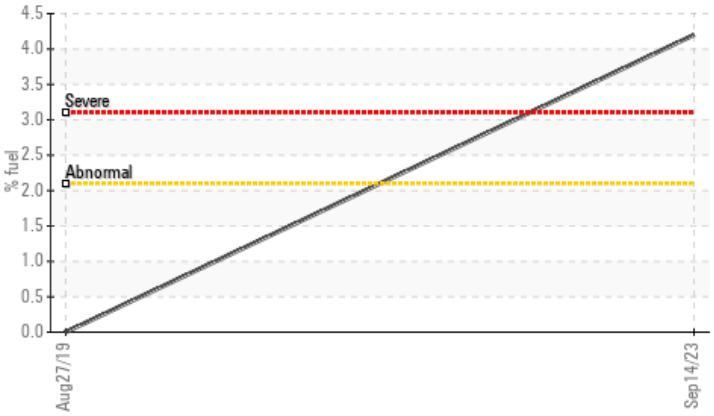


FUEL

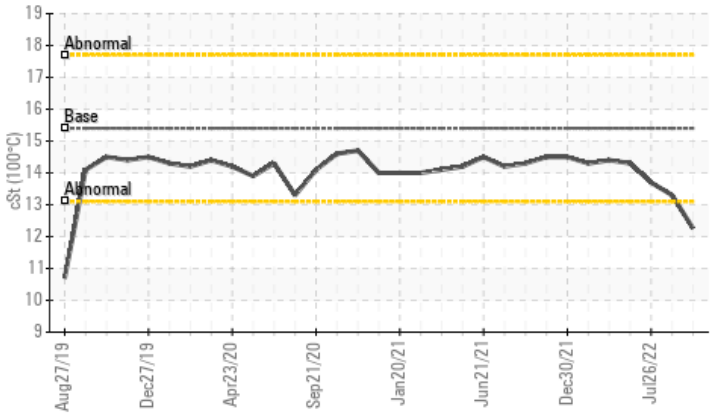
Machine Id
JOHN DEERE 544L 1DW544LZVKF699766
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

Fuel Dilution



Viscosity @ 100°C



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.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	NORMAL	NORMAL
Fuel	%	ASTM D3524	>2.1	**4.2**	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	**12.26**	13.3	13.7

Customer Id: VANASH
Sample No.: JR0176977
Lab Number: 05963076
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	MISSED	Oct 17 2023	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	MISSED	Oct 17 2023	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

28 Mar 2023 Diag: Wes Davis

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

26 Jul 2022 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.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

26 Apr 2022 Diag: Wes Davis

NORMAL

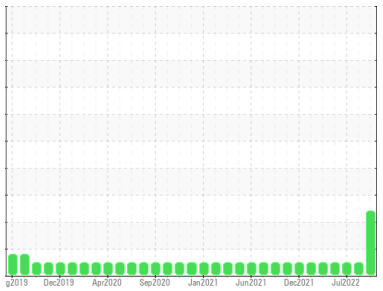
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

JAMES RIVER EQUIPMENT

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
JOHN DEERE 544L 1DW544LZVKF699766
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)

DIAGNOSIS

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**JR0176977**	JR0160584	JR0135749
Sample Date		Client Info		**14 Sep 2023**	28 Mar 2023	26 Jul 2022
Machine Age	hrs	Client Info		**18142**	17821	17301
Oil Age	hrs	Client Info		**321**	520	583
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>50	**12**	---	---
Iron	ppm	ASTM D5185m	>51	**17**	29	12
Chromium	ppm	ASTM D5185m	>11	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**2**	2	<1
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>31	**3**	6	3
Lead	ppm	ASTM D5185m	>26	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>26	**1**	4	1
Tin	ppm	ASTM D5185m	>4	**<1**	<1	<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		**219**	168	145
Barium	ppm	ASTM D5185m		**<1**	0	0
Molybdenum	ppm	ASTM D5185m		**240**	249	250
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**757**	759	763
Calcium	ppm	ASTM D5185m		**1265**	1390	1418
Phosphorus	ppm	ASTM D5185m		**842**	815	782
Zinc	ppm	ASTM D5185m		**1009**	1019	1005
Sulfur	ppm	ASTM D5185m		**3302**	3282	3263

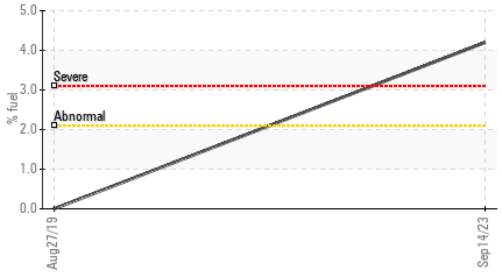
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	**8**	10	9
Sodium	ppm	ASTM D5185m	>31	**3**	4	2
Potassium	ppm	ASTM D5185m	>20	**2**	4	0
Fuel	%	ASTM D3524	>2.1	**4.2**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**9.3**	9.8	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.8**	24.7	25.8

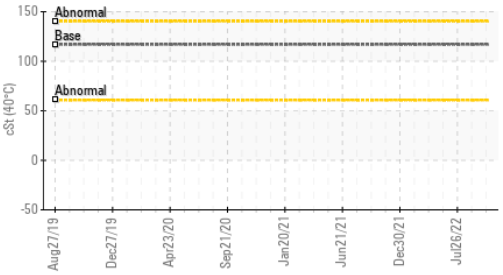
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.4**	18.3	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	**8.5**	7.6	9.1

OIL ANALYSIS REPORT

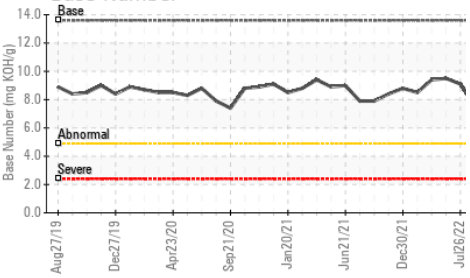
Fuel Dilution



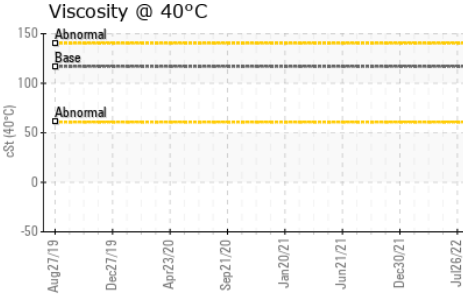
Viscosity @ 40°C



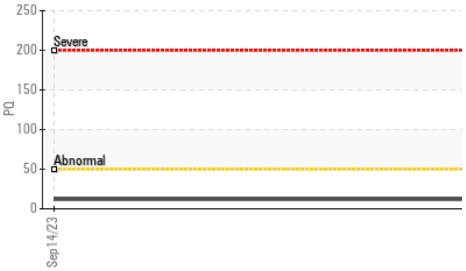
Base Number



Viscosity @ 40°C



PQ

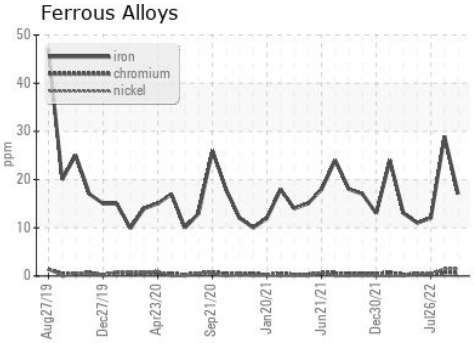


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

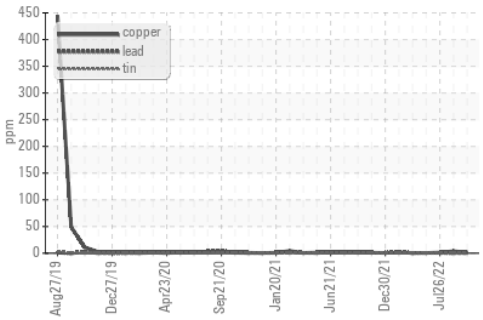
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **12.26**	13.3	13.7

GRAPHS

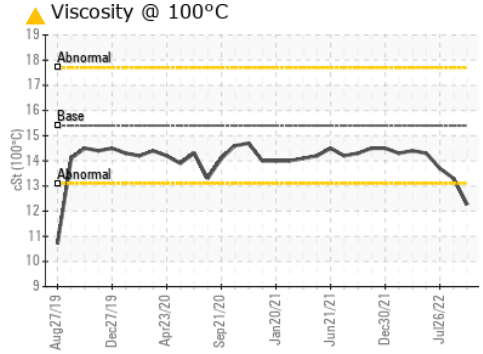
Ferrous Alloys



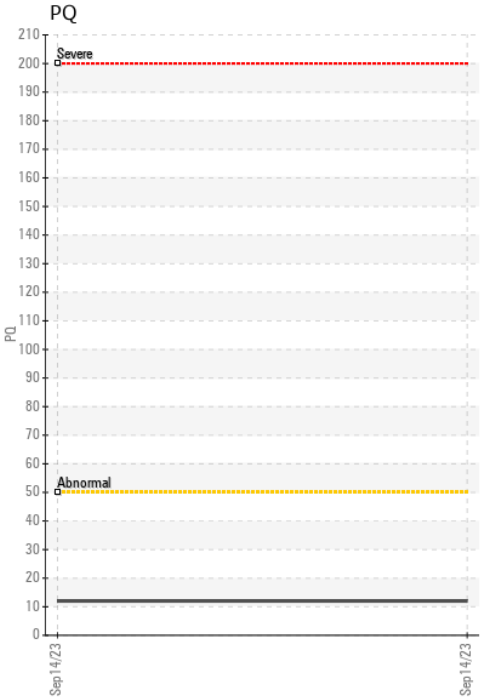
Non-ferrous Metals



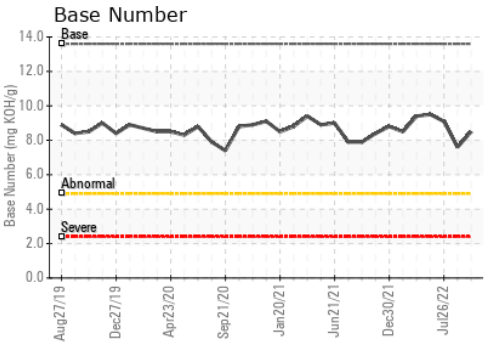
▲ Viscosity @ 100°C



PQ



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0176977 **Received** : 27 Sep 2023
Lab Number : 05963076 **Diagnosed** : 05 Oct 2023
Unique Number : 10669627 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: FuelDilution, KV40, PercentFuel, PQ, 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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