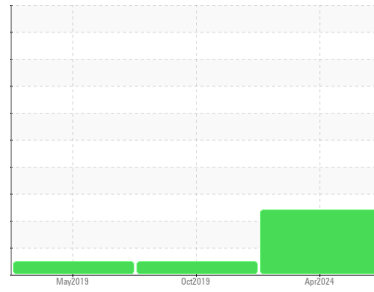




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
JOHN DEERE 40344 ST28
 Component
Diesel Engine
 Fluid
TRC 106768-2050 10W30 (7 QTS)

DIAGNOSIS

Recommendation

We advise an early resample to confirm this situation.

Wear

Clutch and/or bushing/bearing wear is indicated.

Contamination

Appearance is a red non-engine oil. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		TR06159331	TR04829415	TR04729200
Sample Date	Client Info		23 Apr 2024	21 Oct 2019	20 May 2019
Machine Age	hrs	Client Info	1610	894	798
Oil Age	hrs	Client Info	1064	348	200
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.21	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>51	14	13	10
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	95	102
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>31	2	3	3
Lead	ppm	ASTM D5185m	>26	10	<1	<1
Copper	ppm	ASTM D5185m	>26	▲ 90	19	11
Tin	ppm	ASTM D5185m	>4	▲ 8	0	<1
Antimony	ppm	ASTM D5185m		---	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		119	64	76
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		<1	3	2
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		18	300	299
Calcium	ppm	ASTM D5185m		3849	1940	2052
Phosphorus	ppm	ASTM D5185m		1319	952	1030
Zinc	ppm	ASTM D5185m		1584	1127	1160
Sulfur	ppm	ASTM D5185m		4231	1976	3753

CONTAMINANTS

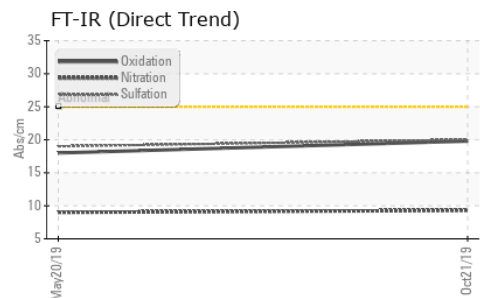
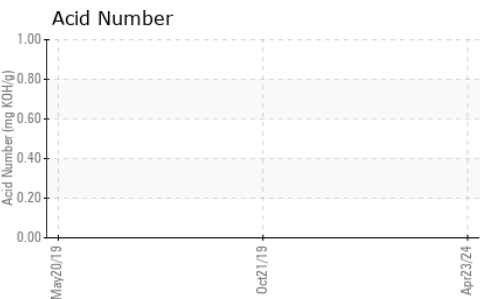
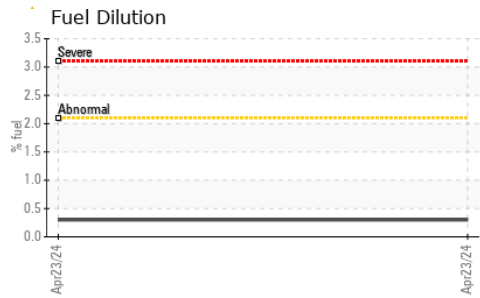
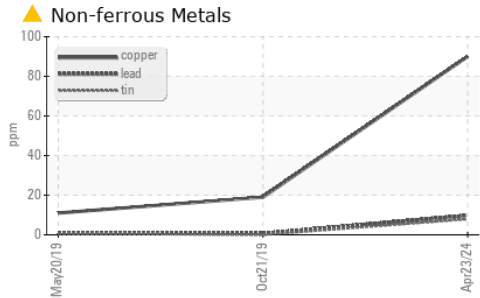
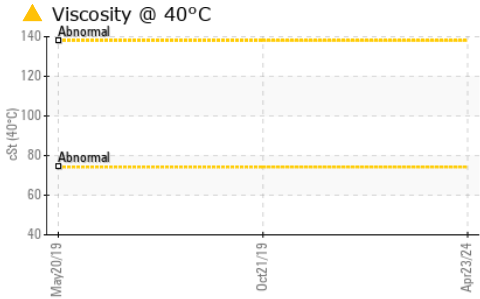
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>22	21	4	4
Sodium	ppm	ASTM D5185m	>31	9	6	7
Potassium	ppm	ASTM D5185m	>20	2	<1	<1
Fuel	%	ASTM D3524	>2.1	0.3	<1.0	<1.0

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	---	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	---	9.3	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	---	20	19



OIL ANALYSIS REPORT

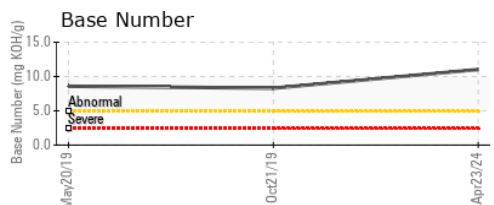
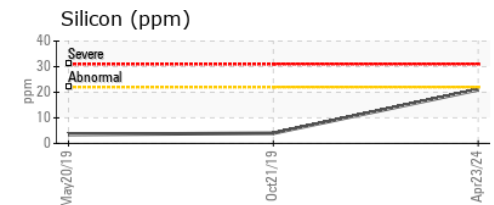
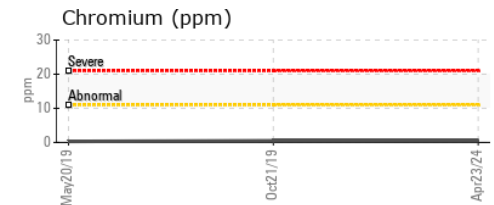
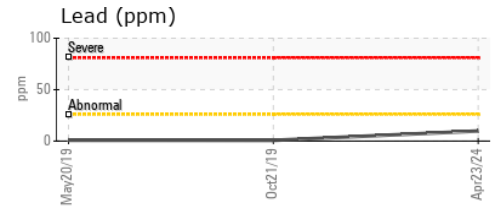
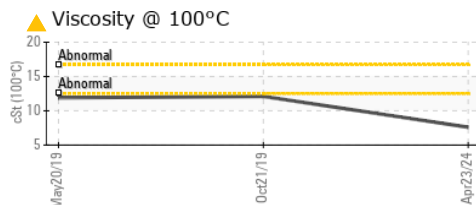
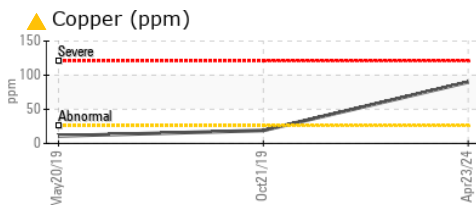
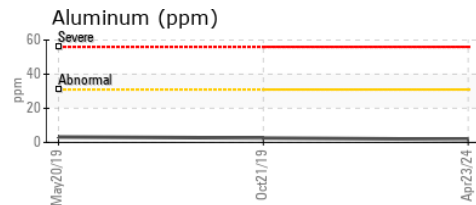
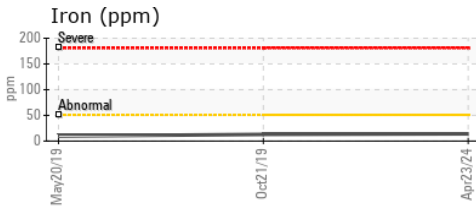


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	*ASTM D7414	>25	---	19.8	18
Acid Number (AN)	mg KOH/g	ASTM D8045	0.87	---	---	
Base Number (BN)	mg KOH/g	ASTM D2896	11.02	8.30	8.58	

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	▲ 46.71	---	---
Visc @ 100°C	cSt	ASTM D445	▲ 7.6	12.1	11.9
Viscosity Index (VI)	Scale	ASTM D2270	128	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06159331 **Received** : 24 Apr 2024
Lab Number : **06159331** **Tested** : 09 May 2024
Unique Number : 10994754 **Diagnosed** : 09 May 2024 - Doug Bogart
Test Package : MOB 2 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

OVERLAND PARK GC CCD
 1801 S HURON ST
 DENVER, CO
 US 80223
 Contact: JAMES WEST

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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)

T:
F: