

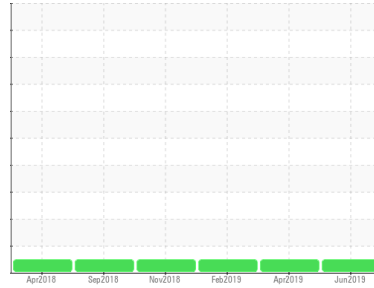


OIL ANALYSIS REPORT



Area
Pleasants Construction
 Machine Id
JOHN DEERE 850K D-165 (S/N 1T0850KXKDE239215)
 Component
Diesel Engine
 Fluid
CASTROL HYPURON 15W40 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0354711	WC0345631	WC0324026
Sample Date	Client Info		05 Jun 2019	29 Apr 2019	28 Feb 2019
Machine Age	hrs	Client Info	7284	7073	6806
Oil Age	hrs	Client Info	211	267	275
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>51	16	17	18
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>31	2	2	2
Lead	ppm	ASTM D5185m	>26	2	0	0
Copper	ppm	ASTM D5185m	>26	7	<1	3
Tin	ppm	ASTM D5185m	>4	0	<1	0
Antimony	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		54	69	50
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		53	54	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		949	908	1097
Calcium	ppm	ASTM D5185m		1382	909	1077
Phosphorus	ppm	ASTM D5185m		982	838	960
Zinc	ppm	ASTM D5185m		1176	1043	1130
Sulfur	ppm	ASTM D5185m		2860	3506	2656

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>22	5	2	4
Sodium	ppm	ASTM D5185m	>31	2	3	2
Potassium	ppm	ASTM D5185m	>20	0	0	<1

INFRA-RED

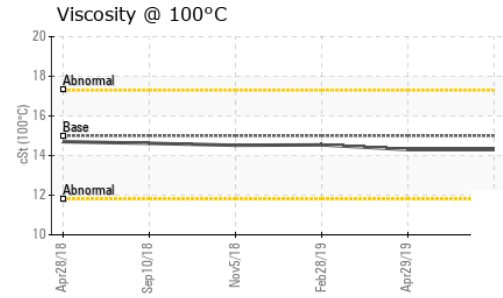
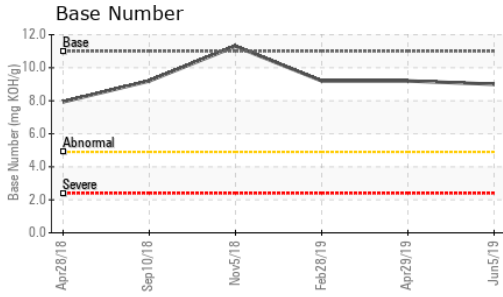
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.4	7.5	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	19.6	19.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.1	15.2	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	11	9	9.2	9.2



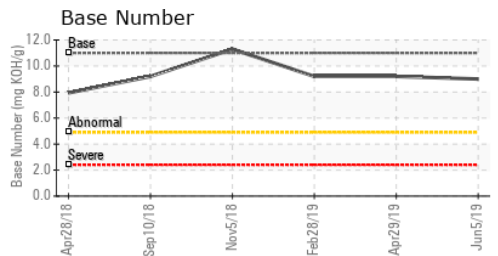
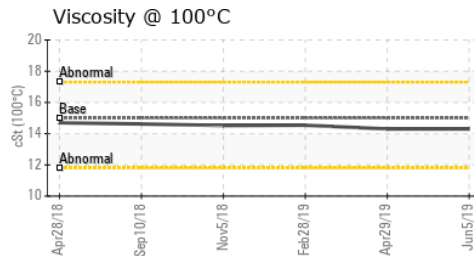
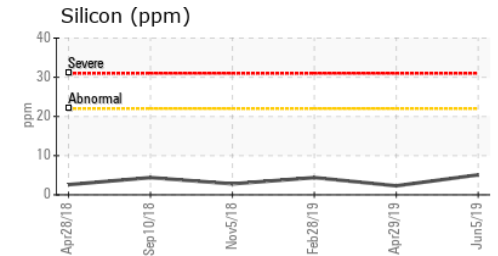
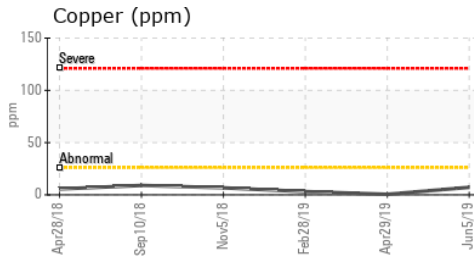
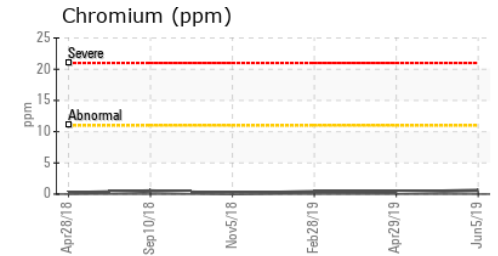
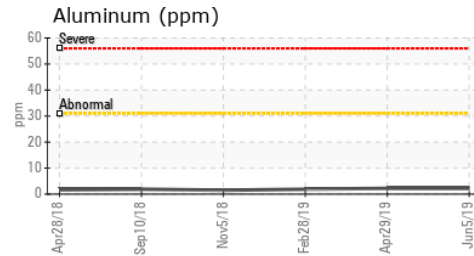
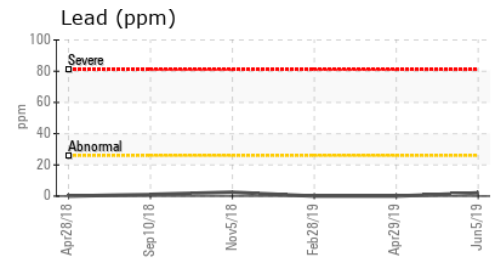
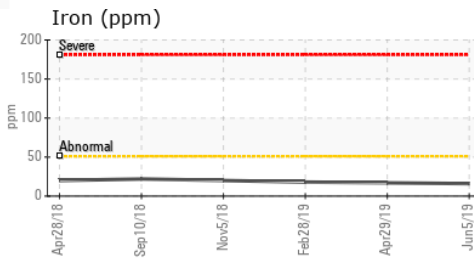
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.0	14.3	14.54

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0354711 **Received** : 10 Jun 2019
Lab Number : **04731311** **Diagnosed** : 12 Jun 2019
Unique Number : 8628090 **Diagnostician** : Don Baldrige
Test Package : MOB1+

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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)