



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Store 4 - Fairmont
Machine Id
John Deere 350G 1FF350GXLFF811051
Component
Diesel Engine
Fluid
JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (7 GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LECP192357	LECP177762	LECP174657
Sample Date		Client Info		19 Dec 2018	27 Dec 2017	15 Mar 2017
Machine Age	hrs	Client Info		3061	2269	945
Oil Age	hrs	Client Info		792	0	425
Filter Age	hrs	Client Info		792	0	425
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The copper level is abnormal. All other component wear rates are normal for time on oil.

Iron	ppm	ASTM D5185m	>51	83	12	39
Chromium	ppm	ASTM D5185m	>11	2	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	10
Titanium	ppm	ASTM D5185m		2	1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>31	4	2	5
Lead	ppm	ASTM D5185m	>26	0	<1	1
Copper	ppm	ASTM D5185m	>26	▲ 189	22	17
Tin	ppm	ASTM D5185m	>4	0	0	9
Vanadium	ppm	ASTM D5185m		1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

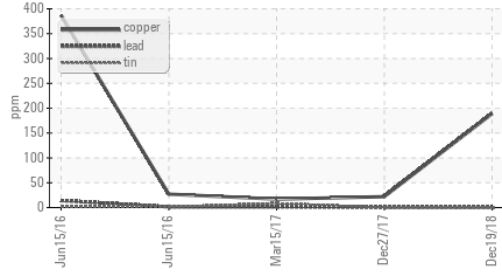
Silicon	ppm	ASTM D5185m	>22	5	5	5
Potassium	ppm	ASTM D5185m	>20	5	0	6
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.8	6.	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	23	19.	17.
Silt	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

FLUID CONDITION

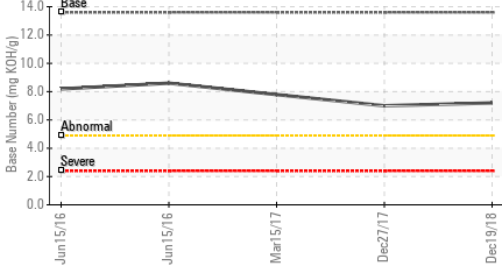
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	5	2	7
Boron	ppm	ASTM D5185m		20	67	256
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		5	4	115
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m		758	636	446
Calcium	ppm	ASTM D5185m		1437	1240	1421
Phosphorus	ppm	ASTM D5185m		1014	898	880
Zinc	ppm	ASTM D5185m		1109	1028	1112
Sulfur	ppm	ASTM D5185m		2691	2923	2789
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	13.	13.
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.2	7.00	7.79
Visc @ 100°C	cSt	ASTM D445	15.4	13.51	14.59	12.75

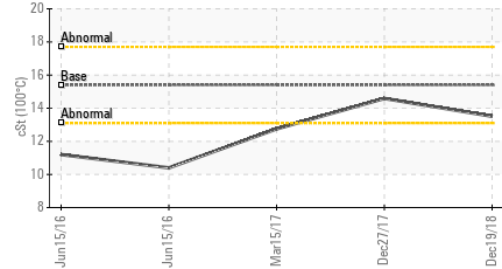
▲ Non-ferrous Metals



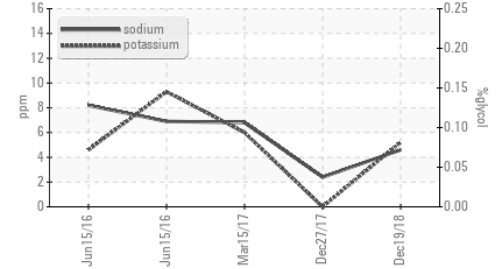
Base Number



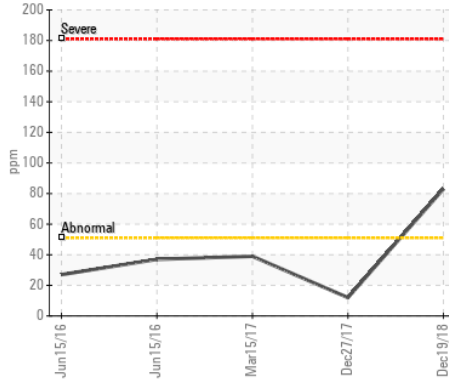
Viscosity @ 100°C



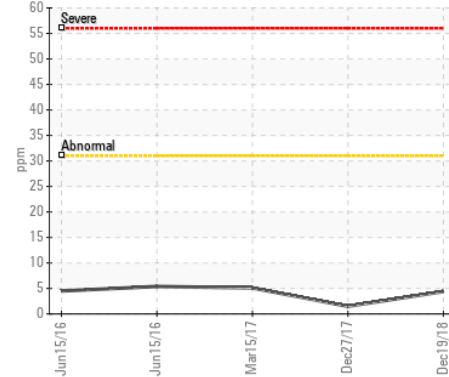
Glycol Contamination



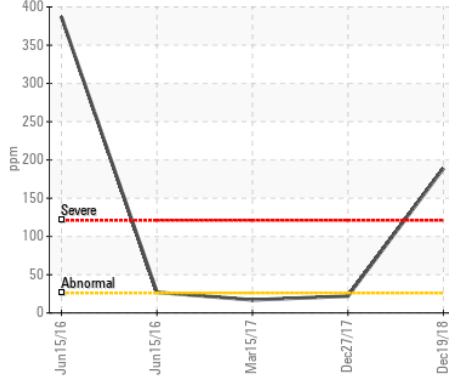
Iron (ppm)



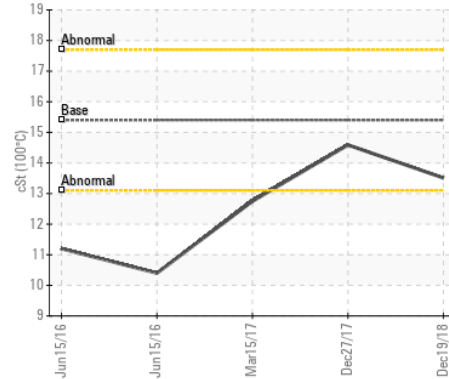
Aluminum (ppm)



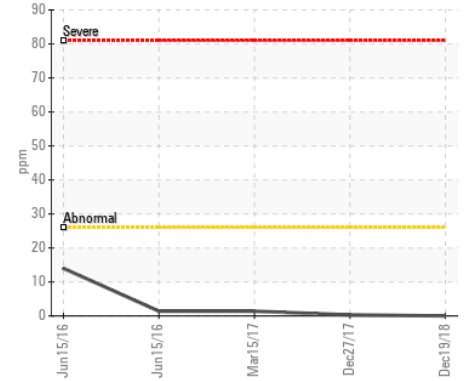
▲ Copper (ppm)



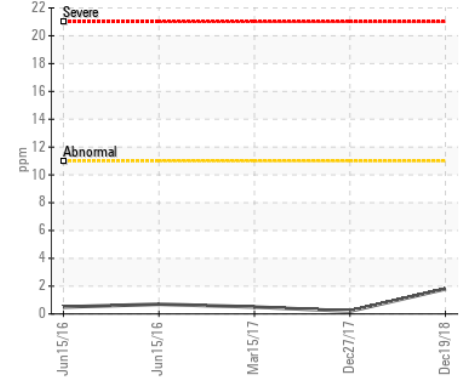
Viscosity @ 100°C



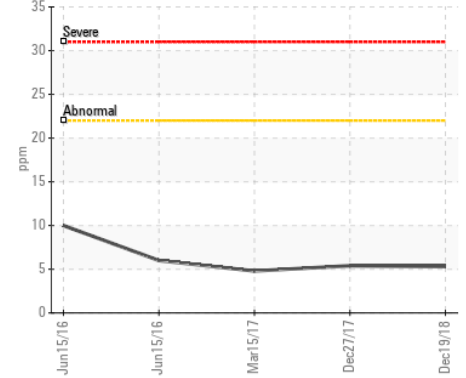
Lead (ppm)



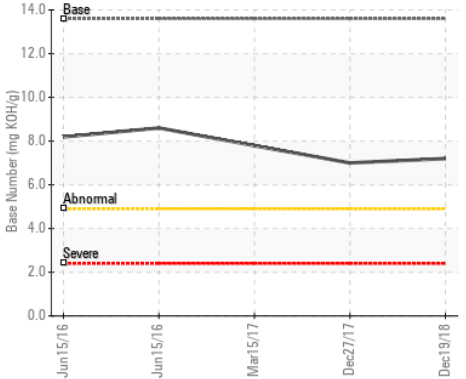
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LECP192357 **Received** : 26 Dec 2018
Lab Number : 04619408 **Diagnosed** : 27 Dec 2018
Unique Number : 8445788 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: Glycol, PQ)

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 F: (740)373-5570

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)