

WEAR ABNORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL



[RO#150051] JOHN DEERE 1FF135GXCNF503370

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (5 GAL)

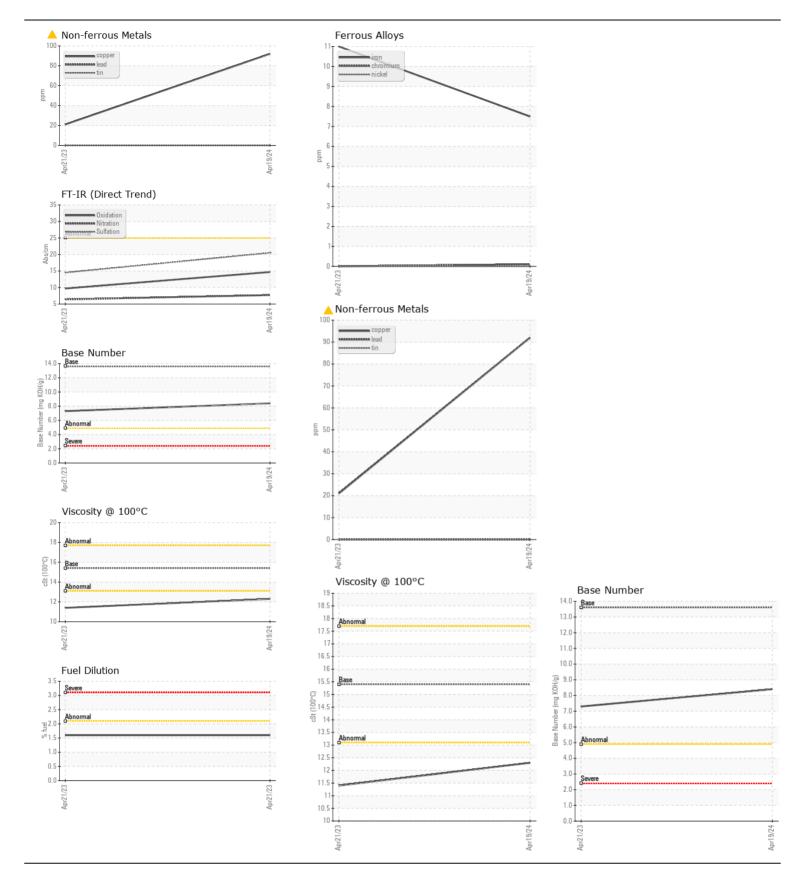
RECOMMENDATION	Test	UOM	Method	Limit/Abn		History1	History2
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		LEC0048938	LEC0040877	
	Sample Date		Client Info		19 Apr 2024	21 Apr 2023	
	Machine Age	hrs	Client Info		1035	463	
	Oil Age	hrs	Client Info		572	463	
	Filter Age	hrs	Client Info		572	463	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				ABNORMAL	ABNORMAL	
WEAR	Iron	ppm	ASTM D5185m	>51	8	11	
The copper level is abnormal. All other component wear rates are normal.	Chromium	ppm	ASTM D5185m	>11	<1	0	
	Nickel	ppm	ASTM D5185m	>5	0	0	
	Titanium	ppm	ASTM D5185m		0	0	
	Silver	ppm	ASTM D5185m	>3	0	0	
	Aluminum	ppm	ASTM D5185m	>31	8	6	
	Lead	ppm	ASTM D5185m		0	0	
	Copper	ppm	ASTM D5185m		9 2	21	
	Tin	ppm	ASTM D5185m		0	0	
	Vanadium	ppm	ASTM D5185m		0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m		15	▲ 24	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		9	12	
	Fuel	%	ASTM D3524		<1.0	1.6	
	Water		WC Method	>0.21	NEG	NEG	
	Glycol		WC Method	0	NEG	NEG	
	Soot %	%	*ASTM D7844		0.1	0.1	
	Nitration	Abs/cm	*ASTM D7624	>20	7.7	6.4	
	Sulfation	Abs/.1mm	*ASTM D7415		20.5	14.5	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual *Visual	NORML	NORML	NORML	
	Odor Emulsified Water	scalar		NORML	NORML NEG	NORML	
	Emuisilieu water	scalar	*Visual	>0.21	NEG	NEG	
FLUID CONDITION The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.	Sodium	ppm	ASTM D5185m	>31	2	3	
	Boron	ppm	ASTM D5185m		236	205	
	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		211	33	
	Manganese	ppm	ASTM D5185m		<1	1	
	Magnesium	ppm	ASTM D5185m		732	132	
	Calcium	ppm	ASTM D5185m		1613	2029	
	Phosphorus	ppm	ASTM D5185m		923	957	
	Zinc	ppm	ASTM D5185m		1119	1212	
	Sulfur	ppm	ASTM D5185m		3392	2894	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	9.7	
	Base Number (BN)	mg KOH/g	ASTM D2896	13.6	8.4	7.3	
		0.	AOTHORIS	45.4			

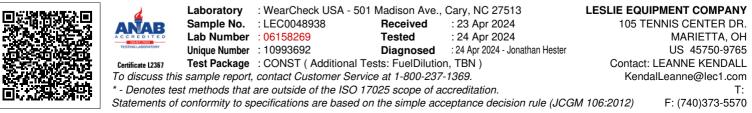
Visc @ 100°C cSt

ASTM D445 15.4

11.4

12.3





Submitted By: STORE 2 - BEAVER - CASEY TONEY Page 2 of 2