

Store 9 - Marietta [RO#144787] HAMM H12i WGG0H235HHAA00880

Diesel Engine

JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 QTS)

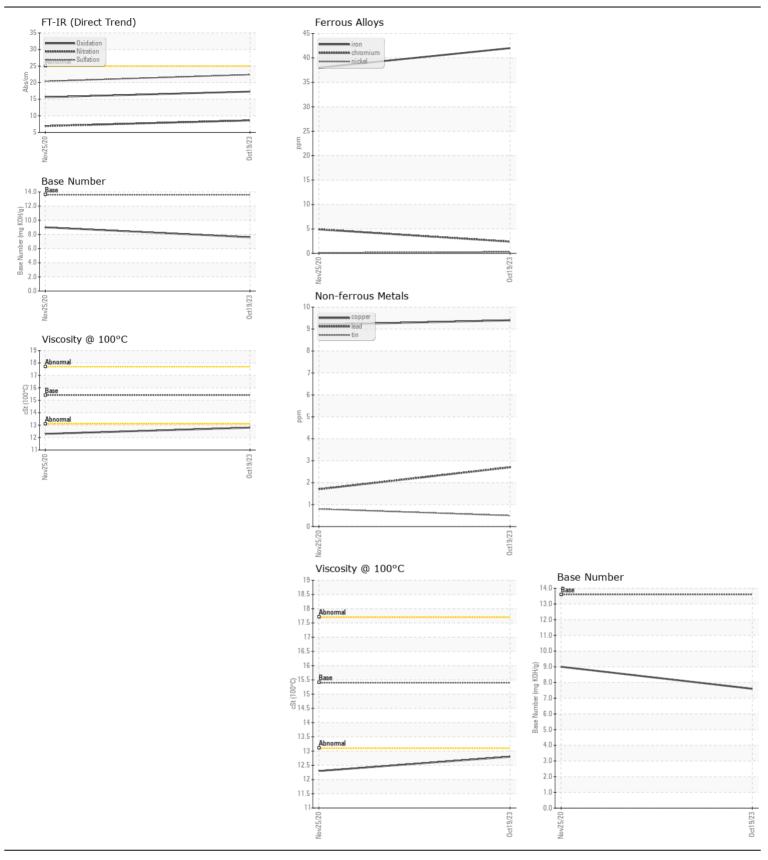
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		LEC0043602	LEC0018453	
	Sample Date		Client Info		19 Oct 2023	25 Nov 2020	
	Machine Age	hrs	Client Info		985	362	
	Oil Age	hrs	Client Info		623	362	
	Filter Age	hrs	Client Info		623	362	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185m	>100	42	38	
	Chromium	ppm	ASTM D5185m	>20	2	5	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>4	<1	<1	
	Titanium	ppm	ASTM D5185m		0	<1	
	Silver	ppm	ASTM D5185m	>3	0	<1	
	Aluminum	ppm	ASTM D5185m		8	6	
	Lead	ppm	ASTM D5185m		3	2	
	Copper	ppm	ASTM D5185m		9	9	
	Tin	ppm	ASTM D5185m		<1	<1	
	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	>120	18	19	
	Potassium	ppm	ASTM D5185m		5	1	
There is no indication of any contamination in the oil.	Fuel	%	ASTM D3524		<1.0	<1.0	
	Water	,0	WC Method		NEG	NEG	
	Glycol		WC Method	20.L	NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.3	0.2	
	Nitration	Abs/cm	*ASTM D7624		8.6	6.9	
	Sulfation	Abs/.1mm	*ASTM D7415		22.4	20.4	
	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		*Visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		0	2	
	Boron	ppm	ASTM D5185m		166	127	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium		ASTM D5185m		0	0	
	Molybdenum	ppm ppm	ASTM D5185m		256	80	
	Manganese	ppm	ASTM D5185m		<1	2	
	Magnesium	ppm	ASTM D5185m		792	532	
	Calcium	ppm	ASTM D5185m		1551	1737	
	Phosphorus	ppm	ASTM D5185m		919	1059	
	Zinc		ASTM D5185m		1132	1254	
	Sulfur	ppm	ASTM D5185m		3476	3470	
	Oxidation	ppm Abs/.1mm	*ASTM D5185111	>25	17.3	15.6	
	Base Number (BN)				7.6		
	Dase Multiber (BN)	niy KOH/g	AGTINI D2090	13.0	7.0	9	

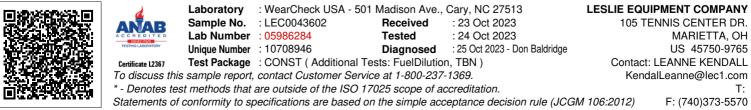
Visc @ 100°C cSt

ASTM D445 15.4

12.8

12.3





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