

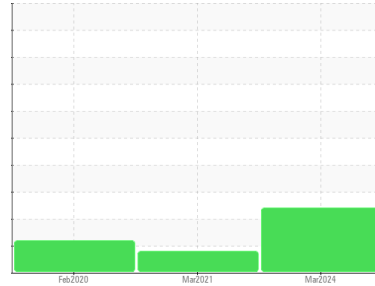


OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Area
GROUPE EGC [02622500]
 Machine Id
JOHN DEERE 350G 210-13 (S/N GXJCD908074)
 Component
Hydraulic System
 Fluid
PANOLIN HLP SYNTH 46 (195 LTR)



DIAGNOSIS

Recommendation

Nous recommandons le remplacement des filtres de ce composant. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. L'indice d'acidité (AN) indique que votre fluide approche de sa fin de vie utile, veuillez échantillonner à intervalles rapprochés de 250 heures.

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

Il y a une légère quantité de limon (particules de 4 à 14 microns) dans l'huile. Il y a une faible concentration (<5.0%) d'huile minérale présente dans le fluide. La teneur en eau est négligeable.

Fluid Condition

Le niveau de AN est supérieur à la limite recommandée.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC	WC	WC
Sample Date	Client Info	12 Mar 2024	15 Mar 2021	18 Feb 2020
Machine Age	hrs	0	5800	4830
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	SEVERE

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >20	10	11	4
Chromium	ppm	ASTM D5185(m) >10	2	2	<1
Nickel	ppm	ASTM D5185(m) >10	0	<1	<1
Titanium	ppm	ASTM D5185(m)	0	<1	<1
Silver	ppm	ASTM D5185(m)	0	0	<1
Aluminum	ppm	ASTM D5185(m) >10	1	1	<1
Lead	ppm	ASTM D5185(m) >10	<1	<1	0
Copper	ppm	ASTM D5185(m) >75	<1	<1	<1
Tin	ppm	ASTM D5185(m) >10	0	0	0
Antimony	ppm	ASTM D5185(m)	0	0	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 0	<1	1	<1
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 0	0	0	0
Manganese	ppm	ASTM D5185(m) 0	0	<1	0
Magnesium	ppm	ASTM D5185(m) 0	<1	<1	0
Calcium	ppm	ASTM D5185(m) 0	1	<1	<1
Phosphorus	ppm	ASTM D5185(m) 1700	1562	1464	1556
Zinc	ppm	ASTM D5185(m) 0	49	38	7
Sulfur	ppm	ASTM D5185(m) 1350	1350	1250	1305
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

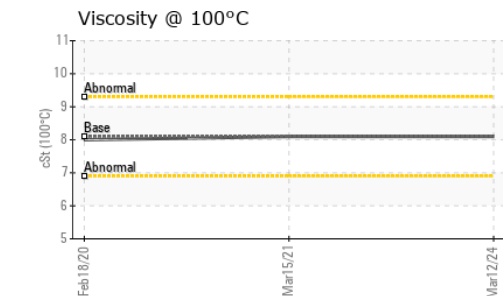
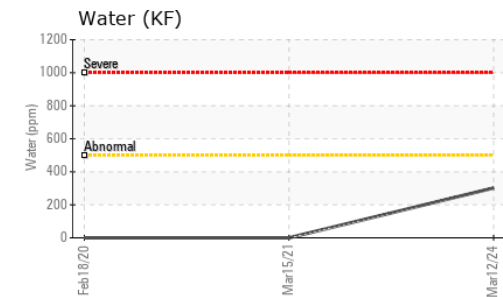
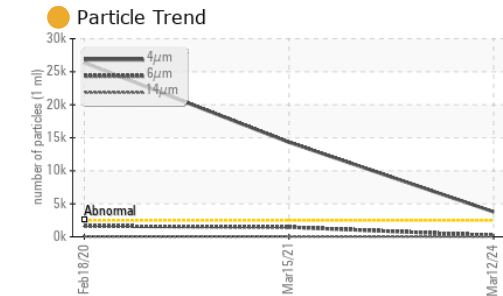
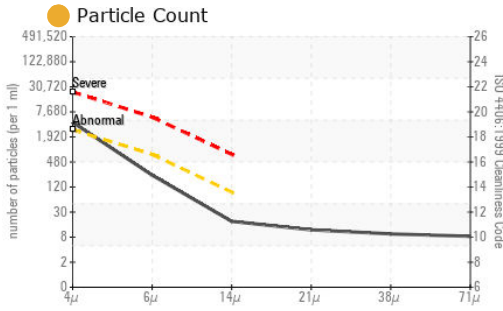
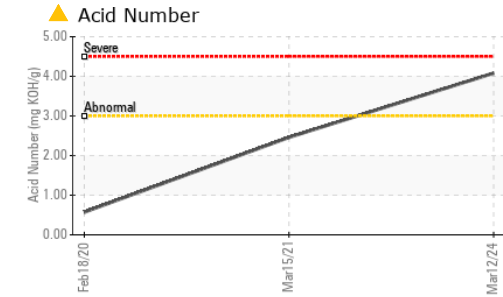
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Silicon	ppm	ASTM D5185(m) >20	4	3	<1
Sodium	ppm	ASTM D5185(m)	1	2	0
Potassium	ppm	ASTM D5185(m) >20	1	<1	<1
Water	%	ASTM D6304* >0.05	0.030	---	---
ppm Water	ppm	ASTM D6304* >500	302	---	---

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	0	---	0
Nitration	Abs/cm	ASTM D7624*	4.4	---	2.4
Sulfation	Abs/.1mm	ASTM D7415*	156.4	---	25.4
Mineral Oil Content	%	ASTM D7418* <5.0%	<5.0	0.0	4.2



OIL ANALYSIS REPORT



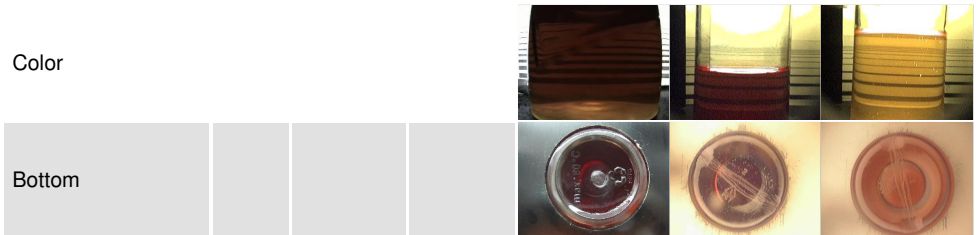
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	● 3781	▲ 14320	▲ 26358
Particles >6µm	ASTM D7647	>640	● 204	▲ 1460	▲ 1629
Particles >14µm	ASTM D7647	>80	● 16	33	23
Particles >21µm	ASTM D7647	>20	● 10	7	5
Particles >38µm	ASTM D7647	>4	● 8	0	0
Particles >71µm	ASTM D7647	>3	● 7	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	● 19/15/11	▲ 21/18/12	▲ 22/18/12

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*		● 160.5	---	18.3
Acid Number (AN)	mg KOH/g ASTM D974*		▲ 4.08	2.46	0.572

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar Visual*	NONE	NONE	NONE	NONE
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*	>0.05	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	47.0	45.1	42.7	46.4
Visc @ 100°C	cSt ASTM D7279(m)	8.1	8.1	8.1	8.0
Viscosity Index (VI)	Scale ASTM D2270*	146	154	166	144

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC
Lab Number : **02622509**
Unique Number : 5747628
Test Package : MOB 2 (Additional Tests: TAN Man)
Received : 15 Mar 2024
Tested : 18 Mar 2024
Diagnosed : 19 Mar 2024 - Kevin Marson

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.



MINERAL OIL CONTENT REPORT

PASS

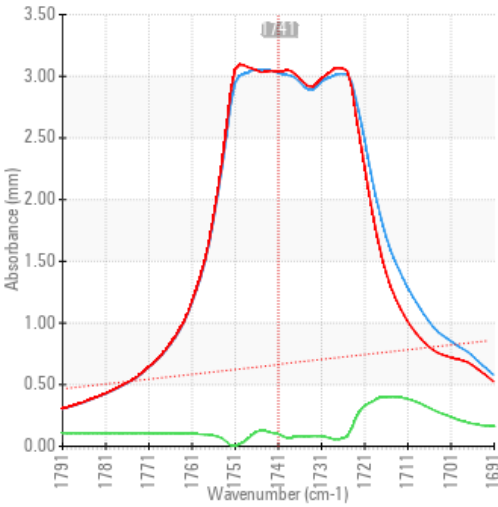


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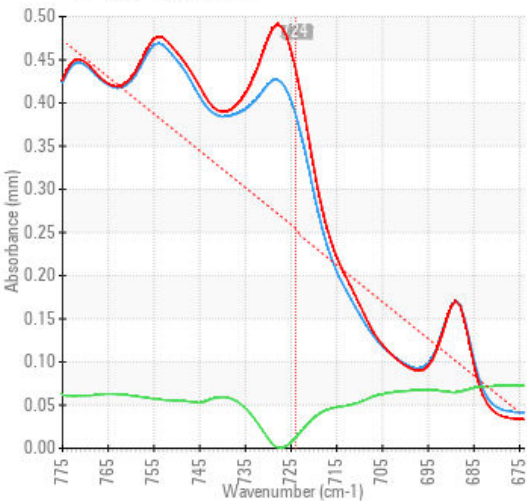
SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	49	38	7
Mineral Oil Content	%	ASTM D7418*	<5.0%	<5.0	0.0	4.2

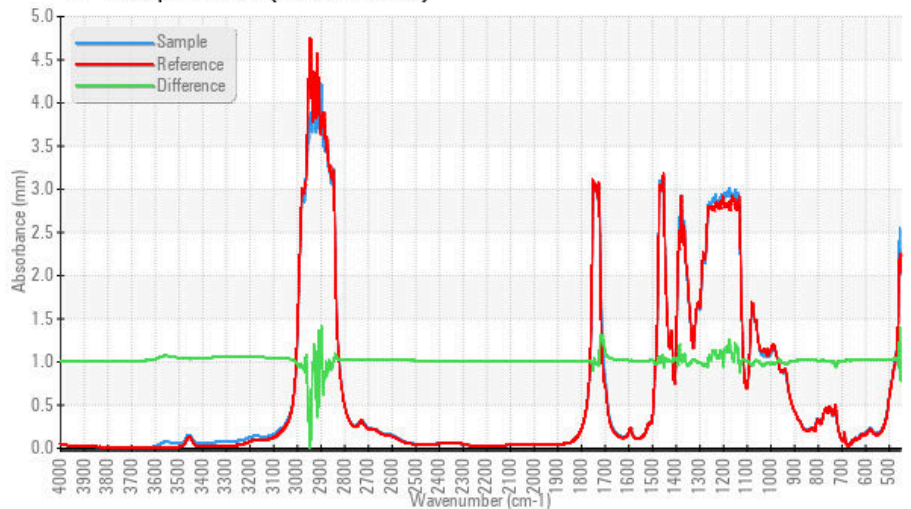
FT-IR - Esters I



FT-IR - Esters II



FT-IR Spectrum (Absorbance)



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