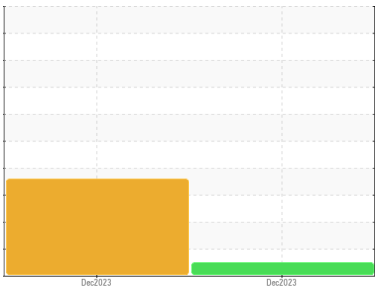
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
POMERLEAU INC [02603360]
Machine Id
JOHN DEERE 644 P 1DW644PAVPLX21119
Component
Hydraulic System
Fluid
PANOLIN HLP SYNTH 46 (210 LTR)

DIAGNOSIS

Recommendation
Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition.

Wear
Les taux d`usure de tous les composants sont normaux.

Contamination
Il y a une faible concentration (<5.0%) d'huile minérale présente dans le fluide. La propreté du système est acceptable pour votre objectif de propreté ISO 4406. La teneur en eau est négligeable. La propreté du système et du fluide est acceptable.

Fluid Condition
Le AN est acceptable pour ce fluide. L`état de l`huile permet d`en prolonger l`utilisation.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC**	WC	---
Sample Date		Client Info		**13 Dec 2023**	06 Dec 2023	---
Machine Age	hrs	Client Info		**7**	7	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**NORMAL**	ABNORMAL	---

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

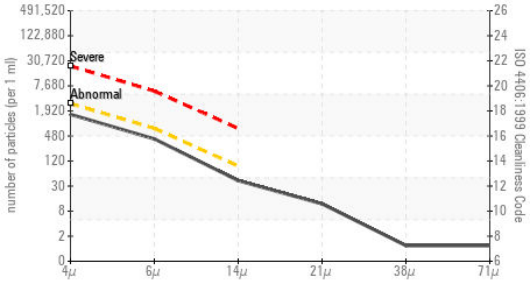
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	<1	---
Barium	ppm	ASTM D5185(m)	0	**<1**	<1	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	---
Manganese	ppm	ASTM D5185(m)	0	**0**	0	---
Magnesium	ppm	ASTM D5185(m)	0	**0**	0	---
Calcium	ppm	ASTM D5185(m)	0	**5**	12	---
Phosphorus	ppm	ASTM D5185(m)	1700	**1585**	1388	---
Zinc	ppm	ASTM D5185(m)	0	**44**	▲ 121	---
Sulfur	ppm	ASTM D5185(m)	1350	**1351**	1335	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**<1**	<1	---
Sodium	ppm	ASTM D5185(m)		**<1**	1	---
Potassium	ppm	ASTM D5185(m)	>20	**0**	3	---
Water	%	ASTM D6304*	>0.05	**0.026**	0.038	---
ppm Water	ppm	ASTM D6304*	>500	**262**	382	---

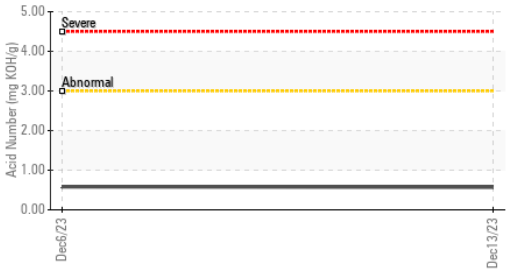
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	---
Nitration	Abs/cm	ASTM D7624*		**3.8**	3.5	---
Sulfation	Abs/.1mm	ASTM D7415*		**159.1**	153.4	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	**<5.0**	▲ 7.0	---

OIL ANALYSIS REPORT

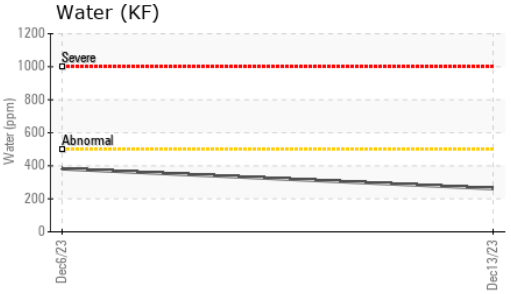
Particle Count



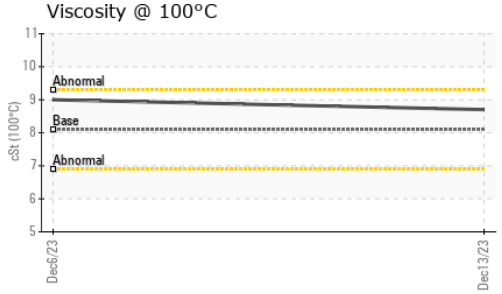
Acid Number



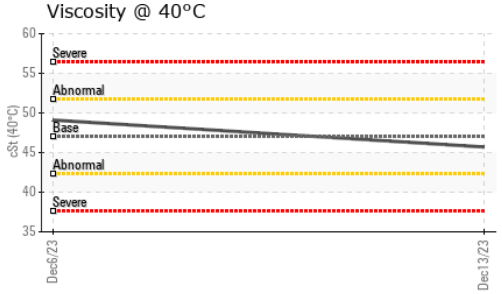
Water (KF)



Viscosity @ 100°C



Viscosity @ 40°C

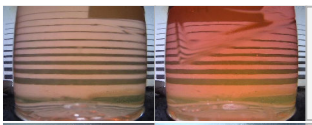


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**1388**	▲ 15656	---
Particles >6µm		ASTM D7647	>640	**359**	▲ 4219	---
Particles >14µm		ASTM D7647	>80	**36**	▲ 208	---
Particles >21µm		ASTM D7647	>20	**10**	▲ 33	---
Particles >38µm		ASTM D7647	>4	**1**	1	---
Particles >71µm		ASTM D7647	>3	**1**	1	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**18/16/12**	▲ 21/19/15	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**151.8**	143.2	---
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.57**	0.58	---

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*	>0.05	**NEG**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	47.0	**45.7**	49.1	---
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	**8.7**	9	---
Viscosity Index (VI)	Scale	ASTM D2270*	146	**172**	166	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC **Recieved** : 15 Dec 2023
Lab Number : 02603653 **Diagnosed** : 19 Dec 2023
Unique Number : 5696738 **Diagnostician** : Bill Quesnel
Test Package : MOB 2 (Additional Tests: TAN Man)

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.

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MINERAL OIL CONTENT REPORT

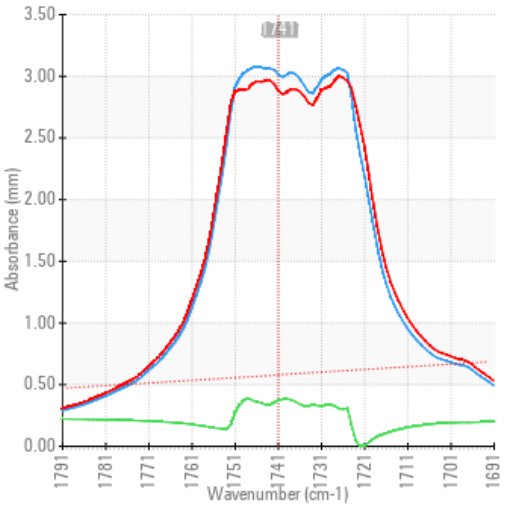
PASS

Area
POMERLEAU INC [02603360]
Machine Id
JOHN DEERE 644 P 1DW644PAVPLX21119
Component
Hydraulic System
Fluid
PANOLIN HLP SYNTH 46 (210 LTR)

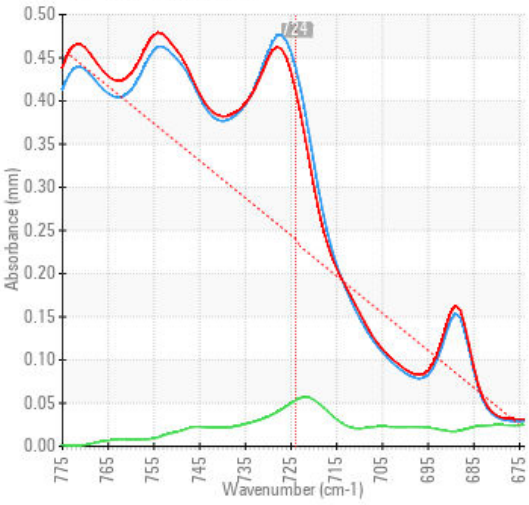
SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	**44**	▲ 121	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	**<5.0**	▲ 7.0	---

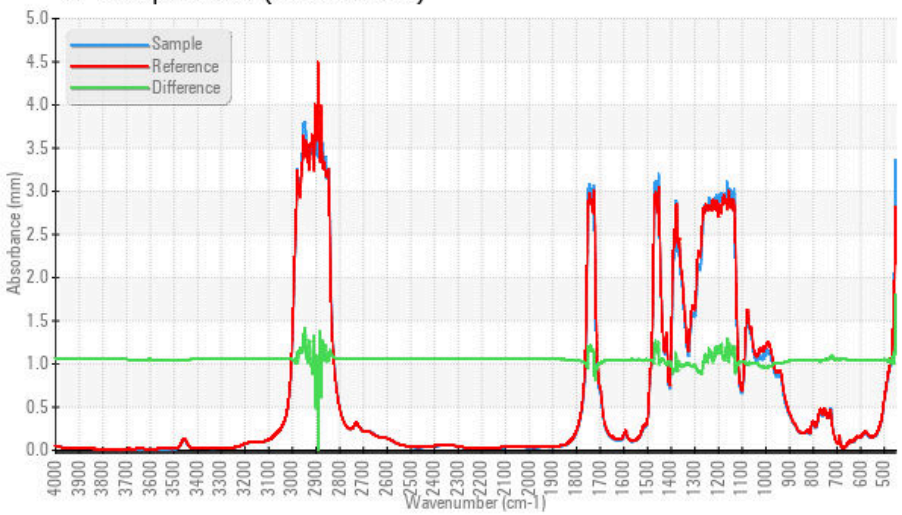
FT-IR - Esters 1



FT-IR - Esters Ii



FT-IR Spectrum (Absorbance)



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