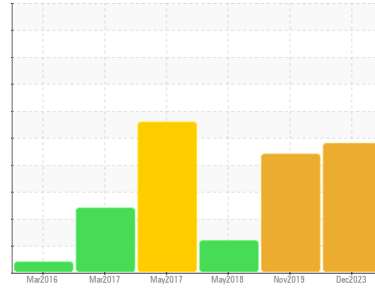




# OIL ANALYSIS REPORT

Sample Rating Trend



CONTAMINANT



Area  
**Jean Leclerc Excavation [02603360]**  
 Machine Id  
**JOHN DEERE 245G 1FF245GXLEE600268**  
 Component  
**Hydraulic System**  
 Fluid  
**PANOLIN HLP SYNTH 46 (215 LTR)**

## DIAGNOSIS

### Recommendation

Vérifier les scelles et/ou les filters pour des points d'entrée des contaminants. Le reniflard d'air doit être réparé. S'il n'est pas classé, nous vous recommandons de le remplacer par un reniflard à air adapté au micron et / ou au dessicant. Si évalué, nous vous recommandons de réparer / remplacer le reniflard. Nous recommandons le remplacement des filtres de ce composant. Échantillonner de nouveau dans 30 à 45 jours afin de contrôler la situation.

### Wear

Usure de cylindre.

### Contamination

Il y a une grande quantité de limon (particules de 4 à 14 microns) dans l'huile. Il y a une concentration modérée (7.5%) d'huile minérale présente dans le fluide. La teneur en eau est négligeable. Le code de propreté du système est beaucoup plus haut que la limite acceptable pour votre objectif de propreté ISO 4406.

### Fluid Condition

Le AN est acceptable pour ce fluide. l'huile peut encore servir si la contamination peut être réduite à un niveau acceptable.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC</b>	WC	WC
Sample Date	Client Info	<b>08 Dec 2023</b>	25 Nov 2019	30 May 2018
Machine Age	hrs	<b>8338</b>	3693	2022
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

## WEAR METALS

method	limit/base	current	history1	history2		
PQ	ASTM D8184*	>50	---	9	---	
Iron	ppm	ASTM D5185(m)	>32	<b>▲ 95</b>	<b>▲ 36</b>	4
Chromium	ppm	ASTM D5185(m)	>9	<b>4</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>9	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>28	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>50	<b>2</b>	1	<1
Tin	ppm	ASTM D5185(m)	>5	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

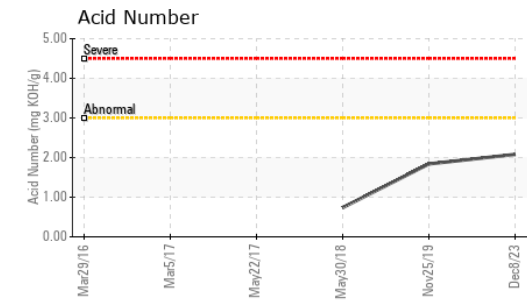
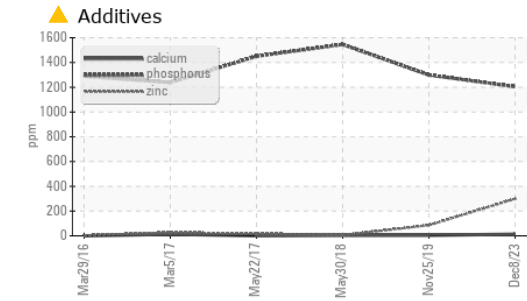
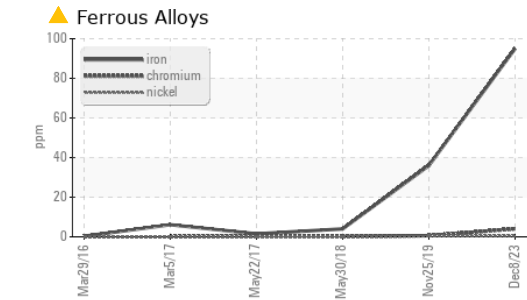
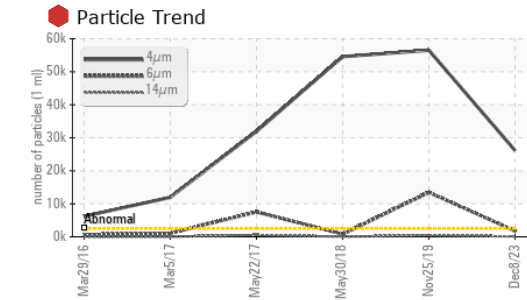
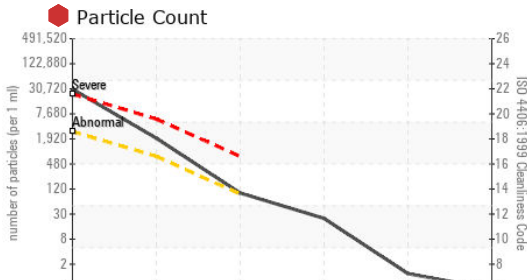
method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)	0	<b>1</b>	1	3
Barium	ppm	ASTM D5185(m)	0	<1	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1	0
Magnesium	ppm	ASTM D5185(m)	0	<b>3</b>	0	<1
Calcium	ppm	ASTM D5185(m)	0	<b>13</b>	4	4
Phosphorus	ppm	ASTM D5185(m)	1700	<b>1204</b>	1299	1546
Zinc	ppm	ASTM D5185(m)	0	<b>▲ 299</b>	85	5
Sulfur	ppm	ASTM D5185(m)	1350	<b>1289</b>	1266	1411
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>11	<b>4</b>	2	2
Sodium	ppm	ASTM D5185(m)	>21	<b>2</b>	<1	1
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1
Water	%	ASTM D6304*	>0.05	<b>0.038</b>	---	---
ppm Water	ppm	ASTM D6304*	>500	<b>387</b>	---	---

## INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*		<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*		<b>4.4</b>	2.2	---
Sulfation	Abs/.1mm	ASTM D7415*		<b>153.7</b>	24.7	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	<b>▲ 7.5</b>	0.0	0.05



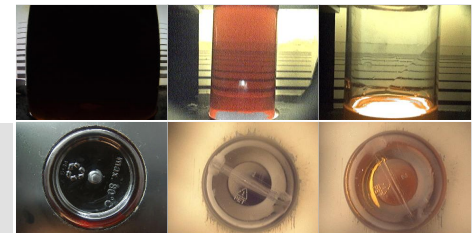
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4μm	ASTM D7647	>2500	26147	56496	54567
Particles >6μm	ASTM D7647	>640	1750	13472	807
Particles >14μm	ASTM D7647	>80	85	451	18
Particles >21μm	ASTM D7647	>20	21	97	6
Particles >38μm	ASTM D7647	>4	1	1	0
Particles >71μm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	22/18/14	23/21/16	23/17/11

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	142.6	18.3	---
Acid Number (AN)	mg KOH/g	ASTM D974*	2.08	1.84	0.737

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*	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	43.6	45.8
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	7.8	8.1
Viscosity Index (VI)	Scale	ASTM D2270*	146	150	147

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC  
**Lab Number** : 02603650  
**Unique Number** : 5696735  
**Test Package** : MOB 2 ( Additional Tests: PQ, TAN Man )

**Envirolin Canada**  
 520 rue Adanac  
 Quebec, QC  
 CA G1C 7B7  
 Contact: Patrick Levesque  
 patrick.levesque@envirolin.com  
 T: (418)623-1216  
 F: (418)660-8889

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

**FAIL**

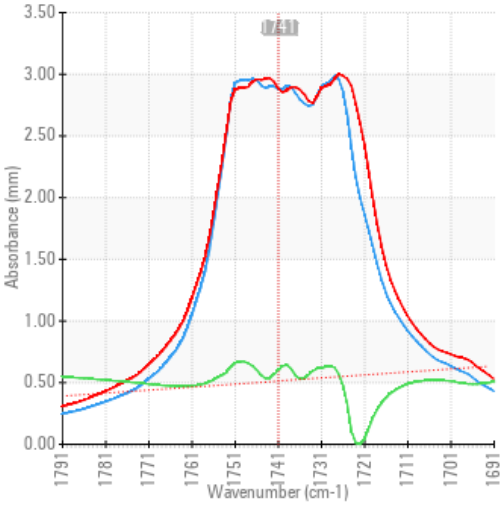


Area  
**Jean Leclerc Excavation [02603360]**  
 Machine Id  
**JOHN DEERE 245G 1FF245GXLEE600268**  
 Component  
**Hydraulic System**  
 Fluid  
**PANOLIN HLP SYNTH 46 (215 LTR)**

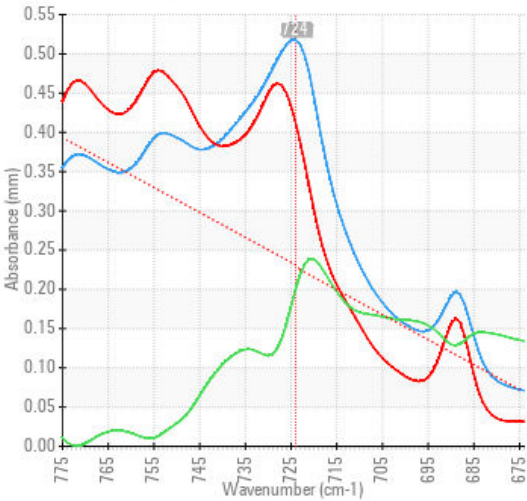
## SPECTRAL ANALYSIS

	method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	▲ 299	85
Mineral Oil Content	%	ASTM D7418*	<5.0%	▲ 7.5	0.05

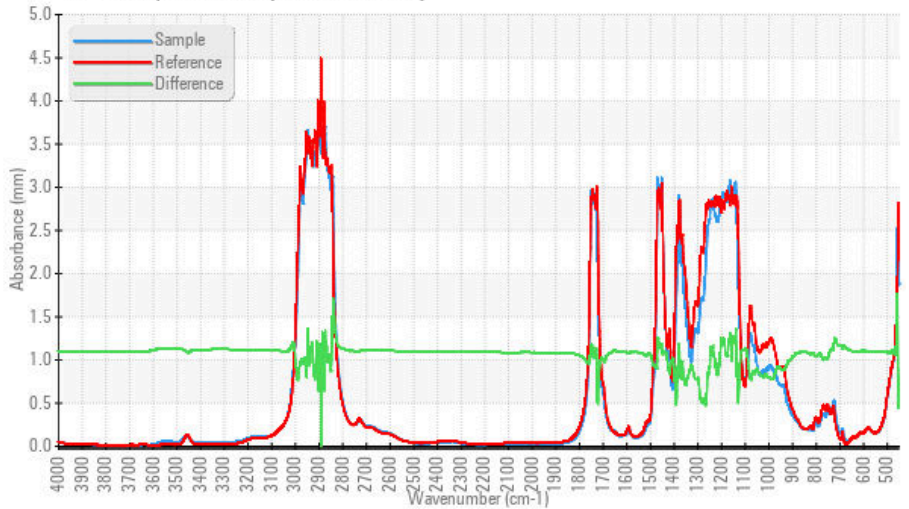
### FT-IR - Esters I



### FT-IR - Esters II



### FT-IR Spectrum (Absorbance)



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC  
**Lab Number** : 02603650  
**Unique Number** : 5696735  
**Test Package** : MOB 2 ( Additional Tests: PQ, TAN Man )

**Received** : 15 Dec 2023  
**Diagnosed** : 18 Dec 2023  
**Diagnostician** : Bill Quesnel

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