

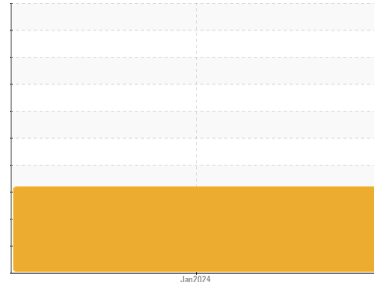


# OIL ANALYSIS REPORT

Sample Rating Trend

CONTAMINANT

Area  
**CONSTRUCTION POLARIS CMM INC [02621867]**  
 Machine Id  
**JLG G1055A 5107 (S/N 0160040964)**  
 Component  
**Hydraulic System**  
 Fluid  
**PANOLIN HLP SYNTH 46 (144 LTR)**



## DIAGNOSIS

### Recommendation

Nous recommandons le remplacement des filtres de ce composant. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

### Wear

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

### Contamination

Il y a une quantité modérée de 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. La propreté du système est supérieure à 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>	---	---
Sample Date	Client Info	<b>03 Jan 2024</b>	---	---
Machine Age	hrs Client Info	<b>9452</b>	---	---
Oil Age	hrs Client Info	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185(m)	>20	<b>5</b>	---	---
Chromium ppm ASTM D5185(m)	>10	<b>1</b>	---	---
Nickel ppm ASTM D5185(m)	>10	<b>&lt;1</b>	---	---
Titanium ppm ASTM D5185(m)		<b>0</b>	---	---
Silver ppm ASTM D5185(m)		<b>0</b>	---	---
Aluminum ppm ASTM D5185(m)	>10	<b>2</b>	---	---
Lead ppm ASTM D5185(m)	>10	<b>&lt;1</b>	---	---
Copper ppm ASTM D5185(m)	>75	<b>&lt;1</b>	---	---
Tin ppm ASTM D5185(m)	>10	<b>0</b>	---	---
Antimony ppm ASTM D5185(m)		<b>0</b>	---	---
Vanadium ppm ASTM D5185(m)		<b>0</b>	---	---
Beryllium ppm ASTM D5185(m)		<b>0</b>	---	---
Cadmium ppm ASTM D5185(m)		<b>0</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185(m)	0	<b>2</b>	---	---
Barium ppm ASTM D5185(m)	0	<b>0</b>	---	---
Molybdenum ppm ASTM D5185(m)	0	<b>1</b>	---	---
Manganese ppm ASTM D5185(m)	0	<b>0</b>	---	---
Magnesium ppm ASTM D5185(m)	0	<b>9</b>	---	---
Calcium ppm ASTM D5185(m)	0	<b>61</b>	---	---
Phosphorus ppm ASTM D5185(m)	1700	<b>1390</b>	---	---
Zinc ppm ASTM D5185(m)	0	<b>72</b>	---	---
Sulfur ppm ASTM D5185(m)	1350	<b>1525</b>	---	---
Lithium ppm ASTM D5185(m)		<b>&lt;1</b>	---	---

## CONTAMINANTS

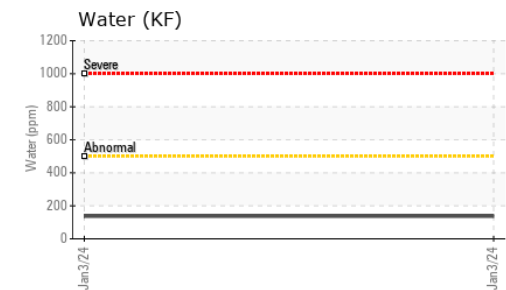
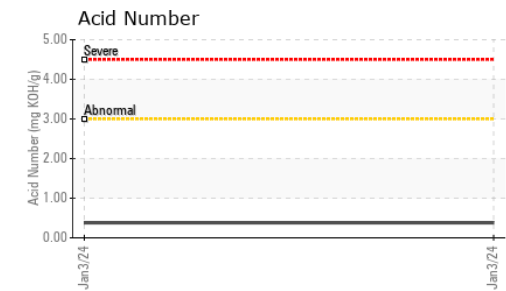
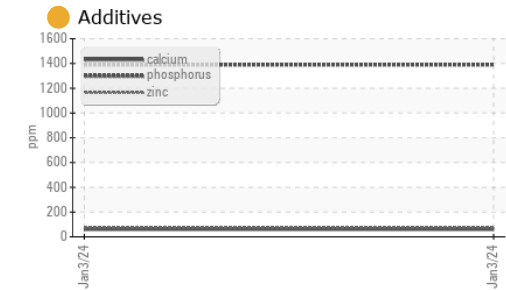
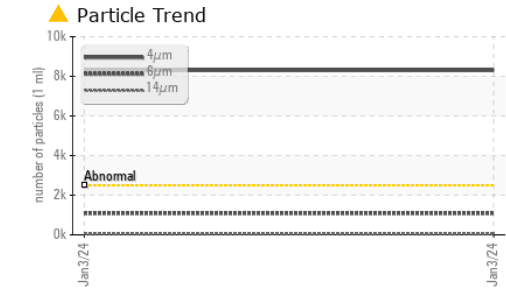
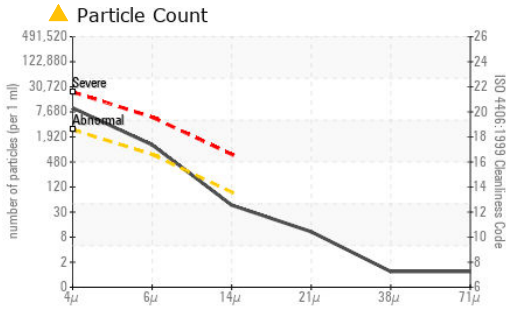
method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m)	>20	<b>11</b>	---	---
Sodium ppm ASTM D5185(m)		<b>2</b>	---	---
Potassium ppm ASTM D5185(m)	>20	<b>2</b>	---	---
Water % ASTM D6304*	>0.05	<b>0.013</b>	---	---
ppm Water ppm ASTM D6304*	>500	<b>137</b>	---	---

## INFRA-RED

method	limit/base	current	history1	history2
Soot % ASTM D7844*		<b>0</b>	---	---
Nitration Abs/cm ASTM D7624*		<b>3.9</b>	---	---
Sulfation Abs/.1mm ASTM D7415*		<b>152.3</b>	---	---
Mineral Oil Content % ASTM D7418*	<5.0%	<b>7.5</b>	---	---



# OIL ANALYSIS REPORT



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC  
**Lab Number** : **02621864**  
**Unique Number** : 5746983  
**Test Package** : MOB 2 ( Additional Tests: TAN Man )  
**Received** : 13 Mar 2024  
**Tested** : 14 Mar 2024  
**Diagnosed** : 14 Mar 2024 - Bill Quesnel

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.

**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

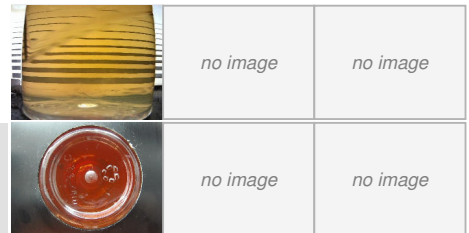
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ <b>8300</b>	---	---
Particles >6µm	ASTM D7647	>640	● <b>1086</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>39</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>9</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>1</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ <b>20/17/12</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414*		<b>147.4</b>	---	---
Acid Number (AN)	mg KOH/g ASTM D974*		<b>0.38</b>	---	---

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar Visual*	NONE	<b>NONE</b>	---	---
Precipitate	scalar Visual*	NONE	<b>NONE</b>	---	---
Silt	scalar Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar Visual*	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar Visual*	>0.05	<b>NEG</b>	---	---
Free Water	scalar Visual*		<b>NEG</b>	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	47.0	<b>45.1</b>	---	---
Visc @ 100°C	cSt ASTM D7279(m)	8.1	<b>8.3</b>	---	---
Viscosity Index (VI)	Scale ASTM D2270*	146	<b>161</b>	---	---

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





# MINERAL OIL CONTENT REPORT

FAIL

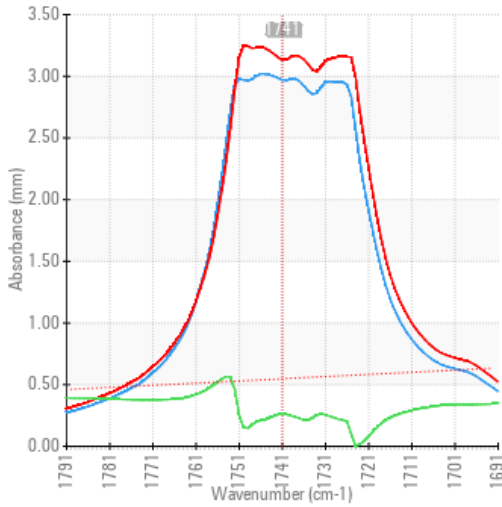


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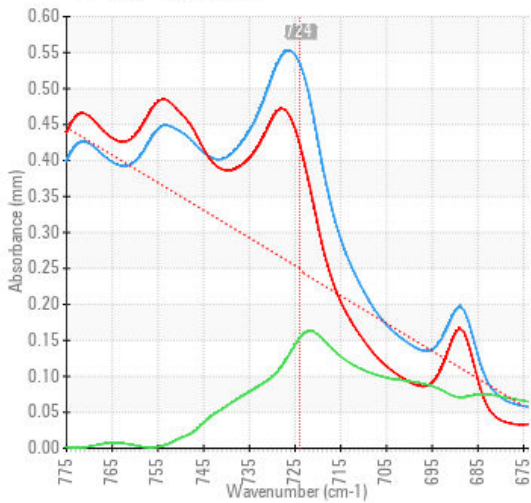
## SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	● 72	---	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	▲ 7.5	---	---

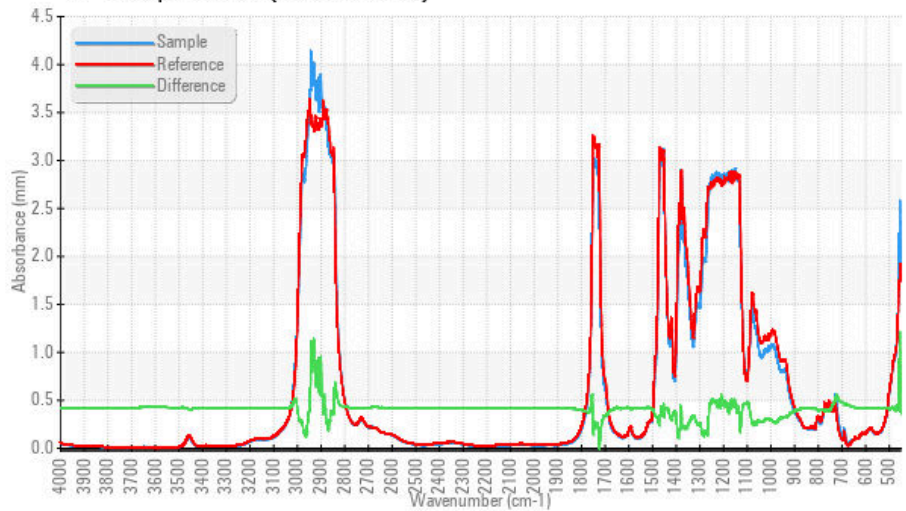
### FT-IR - Esters I



### FT-IR - Esters II



### FT-IR Spectrum (Absorbance)



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