



OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
LES ENTREPRISE FBDL INC [02607341]
 Machine Id
HITACHI ZX130-6 23H181796 (S/N HCMDAQ60C00519322)
 Component
Hydraulic System
 Fluid
PANOLIN HLP SYNTH 46 (185 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 faible concentration (<5.0%) 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	WC	---	---
Sample Date	Client Info	04 Jan 2024	---	---
Machine Age	hrs Client Info	809	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

WEAR METALS

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

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185(m)	0	<1	---	---
Barium ppm ASTM D5185(m)	0	0	---	---
Molybdenum ppm ASTM D5185(m)	0	0	---	---
Manganese ppm ASTM D5185(m)	0	0	---	---
Magnesium ppm ASTM D5185(m)	0	<1	---	---
Calcium ppm ASTM D5185(m)	0	<1	---	---
Phosphorus ppm ASTM D5185(m)	1700	1538	---	---
Zinc ppm ASTM D5185(m)	0	6	---	---
Sulfur ppm ASTM D5185(m)	1350	1509	---	---
Lithium ppm ASTM D5185(m)		<1	---	---

CONTAMINANTS

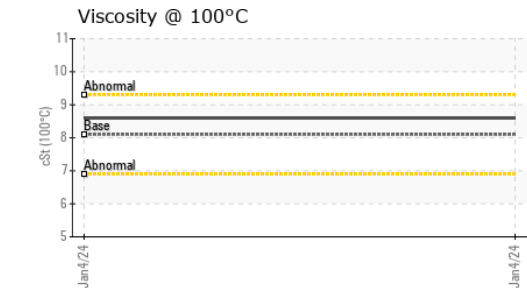
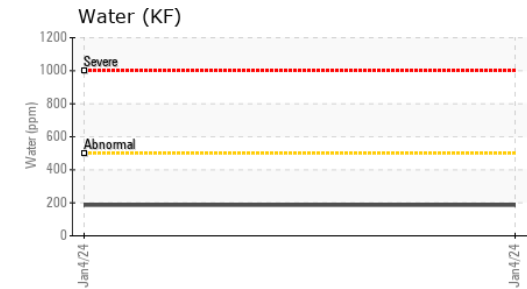
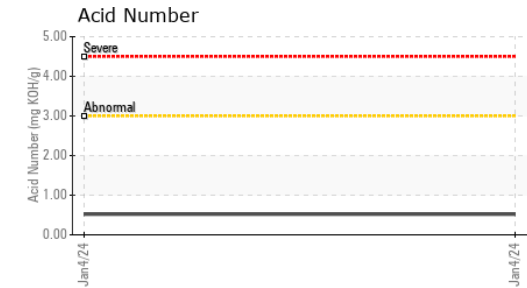
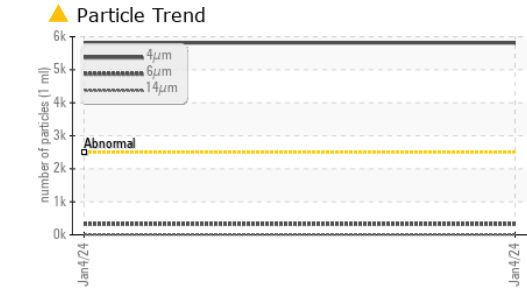
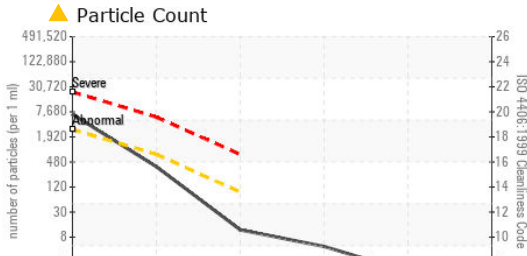
method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m)	>20	2	---	---
Sodium ppm ASTM D5185(m)		<1	---	---
Potassium ppm ASTM D5185(m)	>20	<1	---	---
Water % ASTM D6304*	>0.05	0.018	---	---
ppm Water ppm ASTM D6304*	>500	186	---	---

INFRA-RED

method	limit/base	current	history1	history2
Soot % ASTM D7844*		0	---	---
Nitration Abs/cm ASTM D7624*		4.1	---	---
Sulfation Abs./1mm ASTM D7415*		157.7	---	---
Mineral Oil Content % ASTM D7418*	<5.0%	<5.0	---	---



OIL ANALYSIS REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 5813	---	---
Particles >6µm	ASTM D7647	>640	327	---	---
Particles >14µm	ASTM D7647	>80	10	---	---
Particles >21µm	ASTM D7647	>20	4	---	---
Particles >38µm	ASTM D7647	>4	1	---	---
Particles >71µm	ASTM D7647	>3	1	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 20/16/10	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	154.5	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.52	---	---

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D2729(m)	47.0	47.7	---
Visc @ 100°C	cSt	ASTM D2729(m)	8.1	8.6	---
Viscosity Index (VI)	Scale	ASTM D2270*	146	159	---

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC
Lab Number : 02607342
Unique Number : 5708428
Test Package : MOB 2
Recieved : 08 Jan 2024
Diagnosed : 11 Jan 2024
Diagnostician : Bill Quesnel

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 Quebec, QC
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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

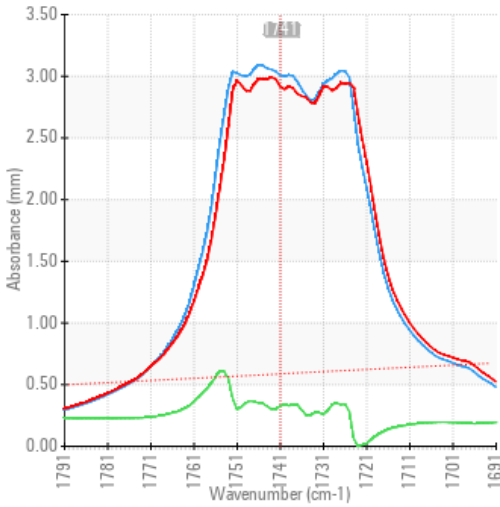


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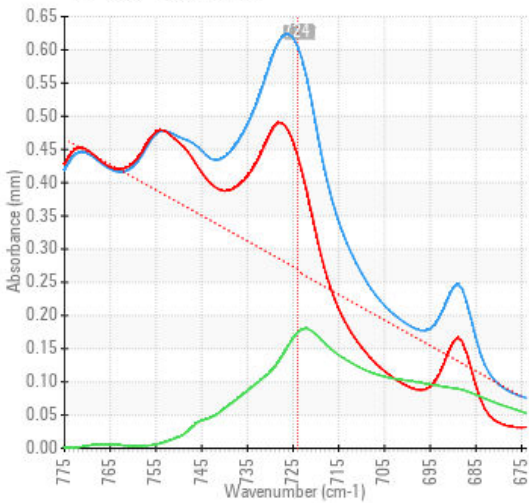
SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	6	---	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	<5.0	---	---

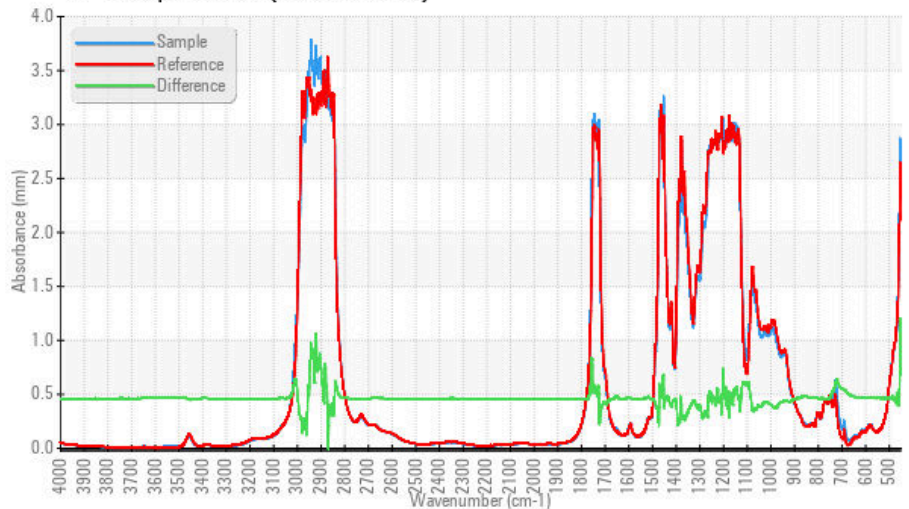
FT-IR - Esters I



FT-IR - Esters II



FT-IR Spectrum (Absorbance)



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