



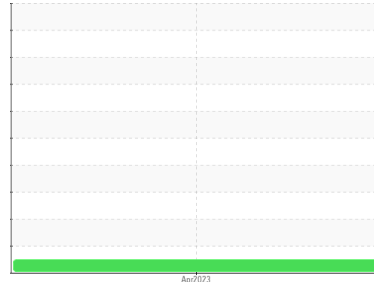
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
METRO VANCOUVER [02547080]
 Machine Id
W-CLD-TNK-821C
 Component
Hydraulic System
 Fluid
PANOLIN HLP SYNTH 32 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is a light concentration (<5.0%) of mineral oil present in the fluid. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC	---	---
Sample Date	Client Info		09 Apr 2023	---	---
Machine Age	hrs Client Info		0	---	---
Oil Age	hrs Client Info		0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			NORMAL	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m)	>20	2	---	---
Chromium	ppm ASTM D5185(m)	>10	0	---	---
Nickel	ppm ASTM D5185(m)	>10	0	---	---
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	2	---	---
Tin	ppm ASTM D5185(m)	>10	<1	---	---
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)		2	---	---
Barium	ppm ASTM D5185(m)		0	---	---
Molybdenum	ppm ASTM D5185(m)		0	---	---
Manganese	ppm ASTM D5185(m)		0	---	---
Magnesium	ppm ASTM D5185(m)		0	---	---
Calcium	ppm ASTM D5185(m)		0	---	---
Phosphorus	ppm ASTM D5185(m)		1601	---	---
Zinc	ppm ASTM D5185(m)		20	---	---
Sulfur	ppm ASTM D5185(m)		1552	---	---
Lithium	ppm ASTM D5185(m)		<1	---	---

CONTAMINANTS

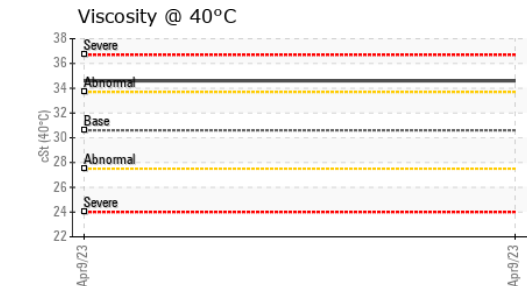
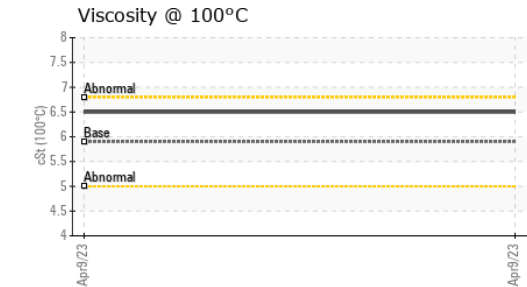
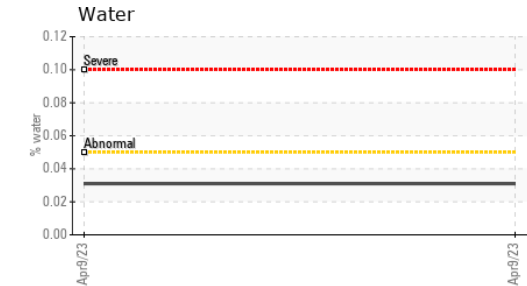
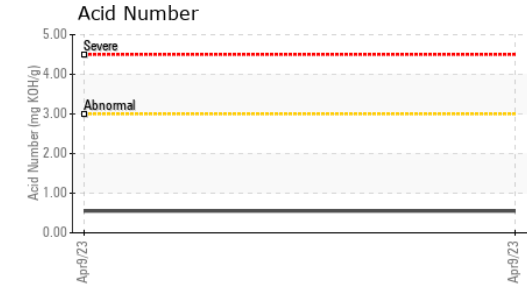
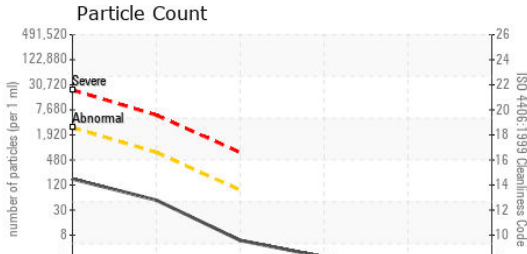
	method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m)	>20	<1	---	---
Sodium	ppm ASTM D5185(m)		<1	---	---
Potassium	ppm ASTM D5185(m)	>20	0	---	---
Water	% ASTM D6304*	>0.05	0.031	---	---
ppm Water	ppm ASTM D6304*	>500	318.2	---	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	% ASTM D7844*		0	---	---
Nitration	Abs/cm ASTM D7624*		4.2	---	---
Sulfation	Abs/.1mm ASTM D7415*		165.9	---	---
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	148	---	---
Particles >6µm	ASTM D7647	>640	46	---	---
Particles >14µm	ASTM D7647	>80	5	---	---
Particles >21µm	ASTM D7647	>20	2	---	---
Particles >38µm	ASTM D7647	>4	1	---	---
Particles >71µm	ASTM D7647	>3	0	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	14/13/10	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	175.4	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.55	---	---

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	34.6	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	6.5	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	143	---	---

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 : **02550517**
Unique Number : 5555527
Test Package : MOB 2 (Additional Tests: TAN Man)
Received : 10 Apr 2023
Diagnosed : 14 Apr 2023
Diagnostician : Bill Quesnel

Envirolin Canada
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 Quebec, QC
 CA G1C 7B7
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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

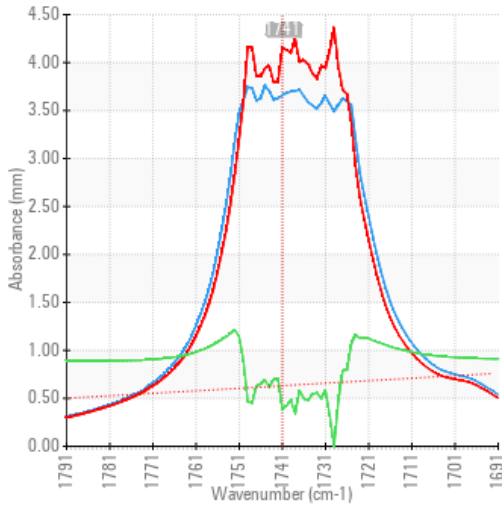


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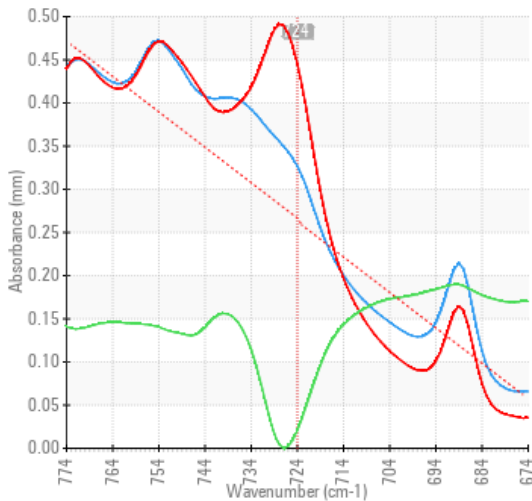
SPECTRAL ANALYSIS

	method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	20	---	---
Mineral Oil Content	%	ASTM D7418*	<5.0	---	---

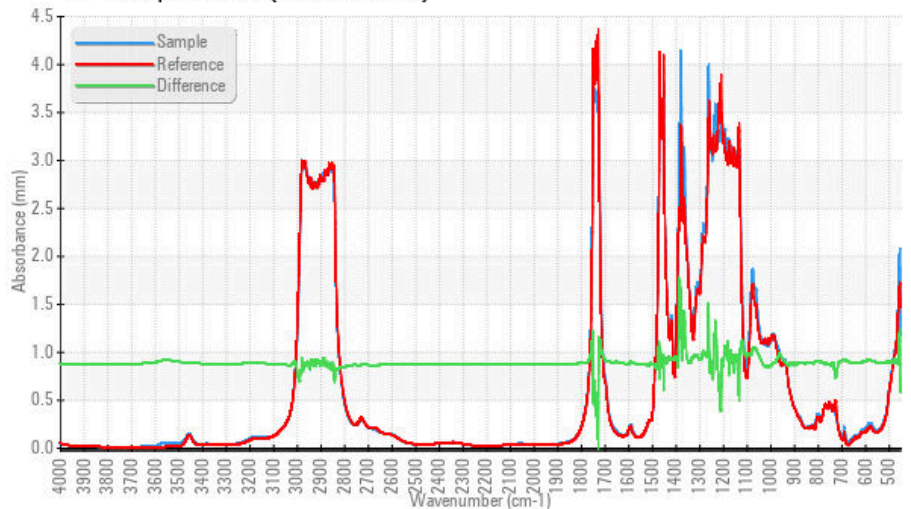
FT-IR - Esters I



FT-IR - Esters II



FT-IR Spectrum (Absorbance)



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