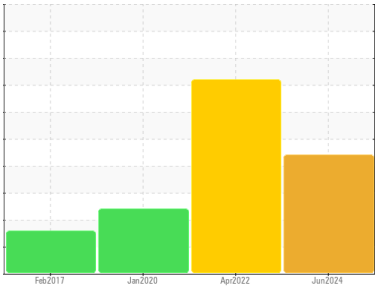
OIL ANALYSIS REPORT

Area
NUGENT CONSTRUCTION INC. [02642182]
Machine Id
2007 KOMATSU PC270LC8 ZZ270 (S/N A87065)
Component
Hydraulic System
Fluid
PANOLIN HLP SYNTH 46 (242 LTR)

Sample Rating Trend



ISO

DIAGNOSIS

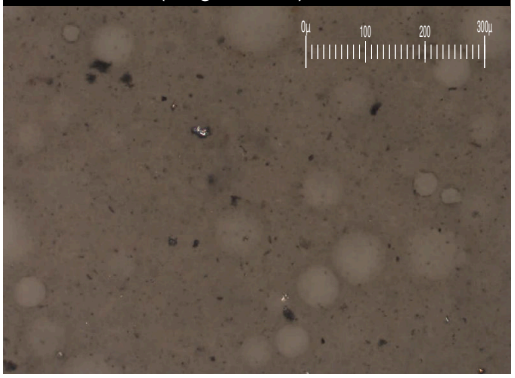
Recommendation
Nous vous recommandons de vérifier tous les endroits par lesquels des contaminants peuvent pénétrer dans le système. Nous vous recommandons de remplacer le filtre et d`utiliser un système de filtrage hors-ligne afin d`améliorer la propreté du fluide. Le reniflard d`air doit être réparé. 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. Échantillonner de nouveau dans 30 à 45 jours afin de contrôler la situation.

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

Contamination
Il y a une quantité élevée de matières particulaires (2 à 100 µm de taille) présente dans l`huile. Il y a une faible concentration (<5.0%) 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.

Particle Filter (Magn: 100 x)



SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC**	WC	WC
Sample Date		Client Info		**12 Jun 2024**	06 Apr 2022	29 Jan 2020
Machine Age	hrs	Client Info		**12241**	14384	13084
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**11**	17	29
Chromium	ppm	ASTM D5185(m)	>10	**2**	3	7
Nickel	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	1
Silver	ppm	ASTM D5185(m)		**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	1	2
Lead	ppm	ASTM D5185(m)	>10	**1**	7	24
Copper	ppm	ASTM D5185(m)	>75	**2**	2	3
Tin	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

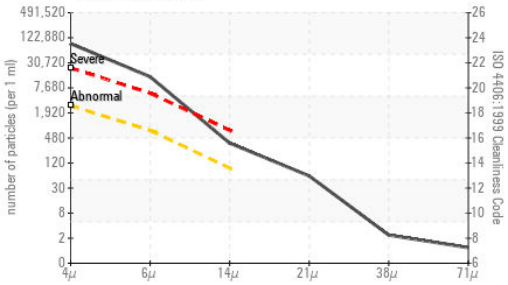
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**2**	3	<1
Barium	ppm	ASTM D5185(m)	0	**<1**	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	**0**	<1	<1
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**2**	8	5
Calcium	ppm	ASTM D5185(m)	0	**52**	30	76
Phosphorus	ppm	ASTM D5185(m)	1700	**1486**	1522	1291
Zinc	ppm	ASTM D5185(m)	0	**43**	59	125
Sulfur	ppm	ASTM D5185(m)	1350	**1387**	1526	1500
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**3**	8	7
Sodium	ppm	ASTM D5185(m)		**2**	2	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	1	1
Water	%	ASTM D6304*	>0.05	**0.047**	---	---
ppm Water	ppm	ASTM D6304*	>500	**471**	---	---

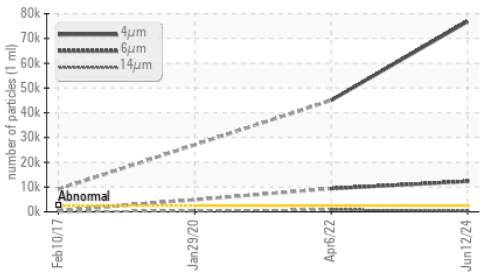
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	---
Nitration	Abs/cm	ASTM D7624*		**4.4**	4.8	---
Sulfation	Abs/.1mm	ASTM D7415*		**155.9**	157.3	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	**<5.0**	<5.0	---

OIL ANALYSIS REPORT

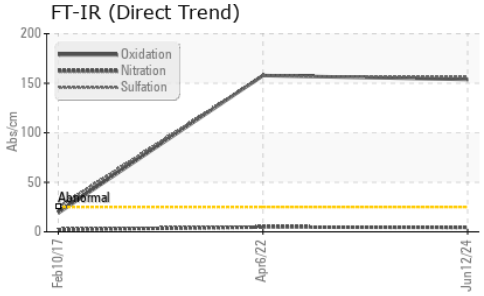
Particle Count



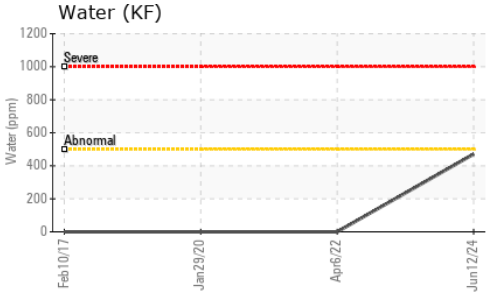
Particle Trend



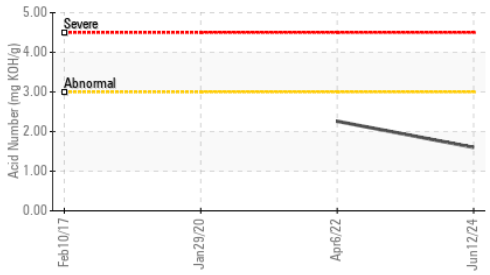
FT-IR (Direct Trend)



Water (KF)



Acid Number

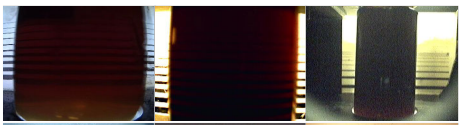
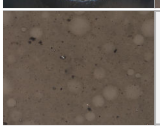


FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ **76814**	▲ 45003	---
Particles >6µm	ASTM D7647	>640	▲ **12313**	▲ 9389	---
Particles >14µm	ASTM D7647	>80	▲ **318**	▲ 836	---
Particles >21µm	ASTM D7647	>20	▲ **52**	▲ 202	---
Particles >38µm	ASTM D7647	>4	**2**	● 9	---
Particles >71µm	ASTM D7647	>3	**1**	1	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ **23/21/15**	▲ 23/20/17	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**153.8**	157.8	---
Acid Number (AN)	mg KOH/g	ASTM D974*		**1.60**	2.26	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	VLITE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	**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	**46.5**	46.4	47.1
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	**8.4**	8.3	8.1
Viscosity Index (VI)	Scale	ASTM D2270*	146	**158**	155	145

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

CALA Testing Accreditation No. 1005078
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC
Lab Number : 02642183
Unique Number : 5799722
Test Package : MOB 2 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, PrtFilter, TAN Mar)
Received : 14 Jun 2024
Tested : 17 Jun 2024
Diagnosed : 19 Jun 2024 - Kevin Marson

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

MINERAL OIL CONTENT REPORT

PASS

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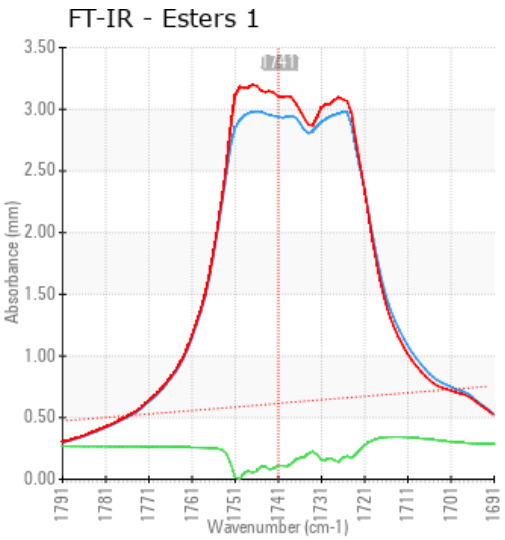
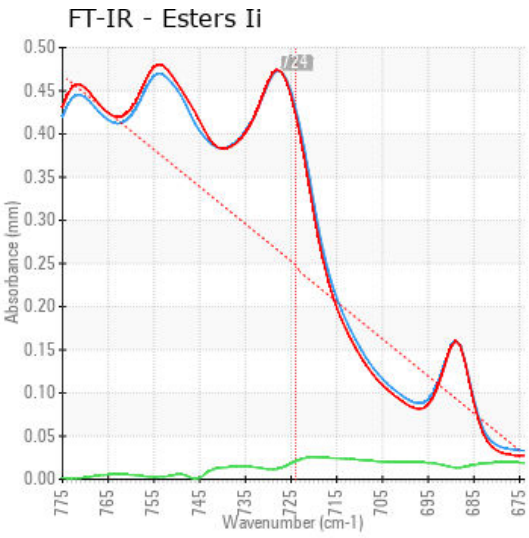
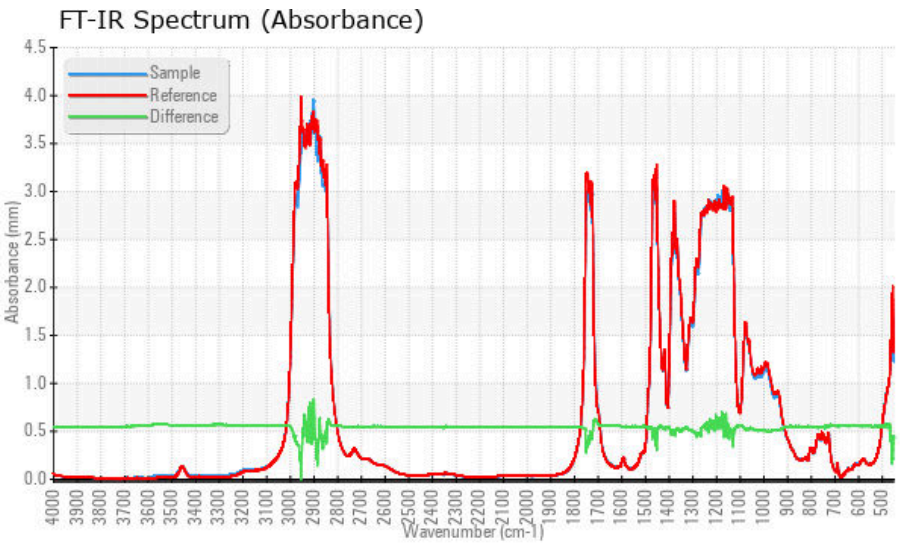
Hydraulic System
Fluid
PANOLIN HLP SYNTH 46 (242 LTR)

SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	**43**	59	125
Mineral Oil Content	%	ASTM D7418*	<5.0%	**<5.0**	<5.0	---







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