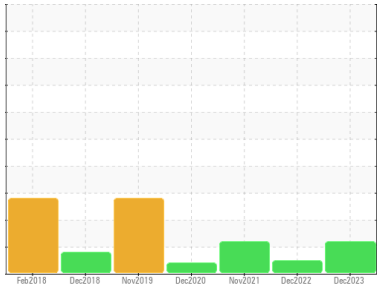
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
GESTION ESC [02606658]
Machine Id
2006 CATERPILLAR CAT304C SC-738 (S/N FPK00458)
Component
Hydraulic System
Fluid
PANOLIN HLP SYNTH 46 (78 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**	WC	WC
Sample Date		Client Info		**22 Dec 2023**	05 Dec 2022	27 Nov 2021
Machine Age	hrs	Client Info		**7027**	8222	6489
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**8**	5	8
Chromium	ppm	ASTM D5185(m)	>10	**4**	2	3
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<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	<1
Lead	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>75	**2**	2	3
Tin	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	<1	<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

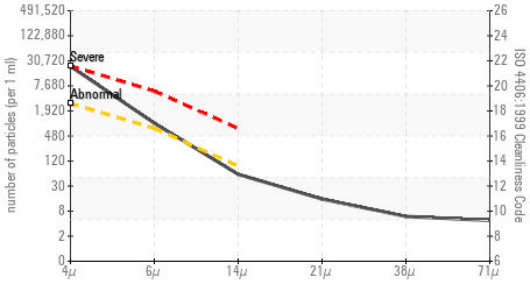
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	1	1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	0	**2**	1	1
Calcium	ppm	ASTM D5185(m)	0	**6**	2	5
Phosphorus	ppm	ASTM D5185(m)	1700	**1398**	1527	1501
Zinc	ppm	ASTM D5185(m)	0	**75**	60	82
Sulfur	ppm	ASTM D5185(m)	1350	**1314**	1327	1347
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**4**	3	5
Sodium	ppm	ASTM D5185(m)		**1**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Water	%	ASTM D6304*	>0.05	**0.029**	0.013	---
ppm Water	ppm	ASTM D6304*	>500	**292**	135.8	---

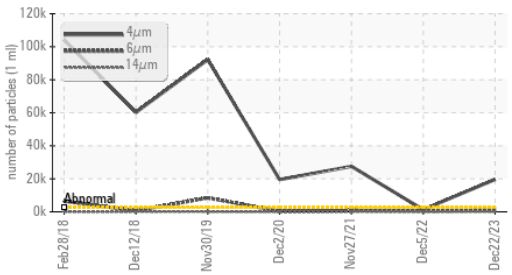
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	---
Nitration	Abs/cm	ASTM D7624*		**4.1**	4.3	---
Sulfation	Abs/.1mm	ASTM D7415*		**158.5**	147.4	---
Mineral Oil Content	%	ASTM D7418*	<5.0%	**<5.0**	<5.0	0.0

OIL ANALYSIS REPORT

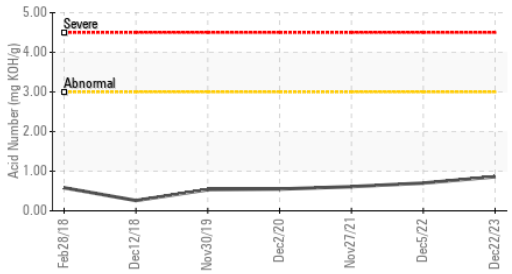
Particle Count



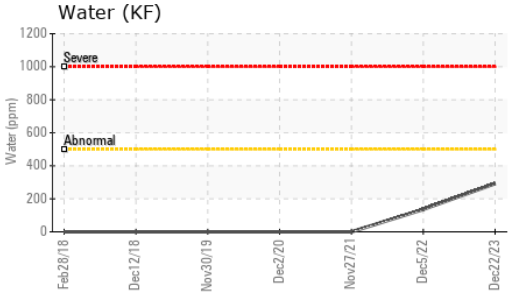
Particle Trend



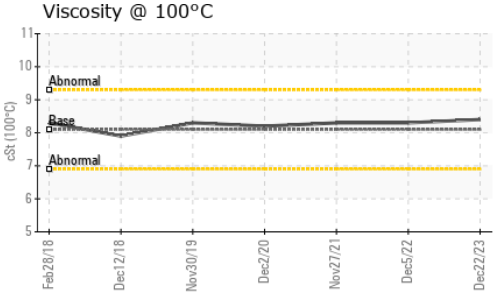
Acid Number



Water (KF)



Viscosity @ 100°C

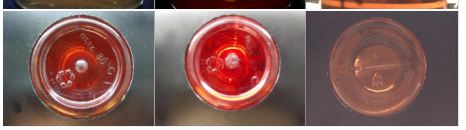


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **19624**	1298	⬢ 27521
Particles >6µm		ASTM D7647	>640	▲ **858**	416	▲ 739
Particles >14µm		ASTM D7647	>80	**51**	63	25
Particles >21µm		ASTM D7647	>20	**13**	24	5
Particles >38µm		ASTM D7647	>4	**5**	6	0
Particles >71µm		ASTM D7647	>3	**4**	5	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **21/17/13**	17/16/13	⬢ 22/17/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**153.0**	150.5	---
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.86**	0.70	0.61

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	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**	NONE	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	**47.6**	46.8	46.4
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	**8.4**	8.3	8.3
Viscosity Index (VI)	Scale	ASTM D2270*	146	**153**	153	155

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC **Recieved** : 04 Jan 2024
Lab Number : 02606659 **Diagnosed** : 09 Jan 2024
Unique Number : 5707745 **Diagnostician** : Bill Quesnel
Test Package : MOB 2 (Additional Tests: TAN Man)

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

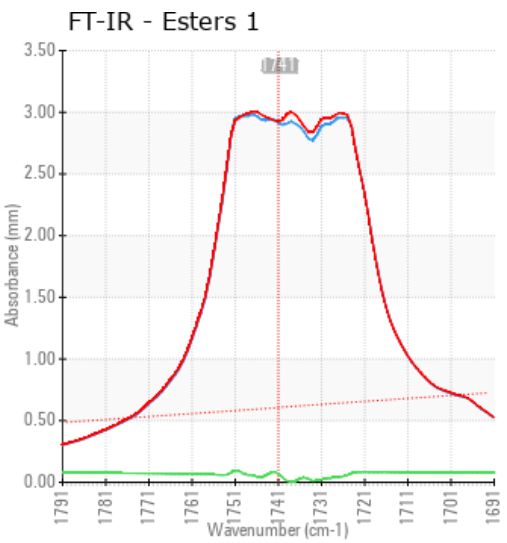
MINERAL OIL CONTENT REPORT

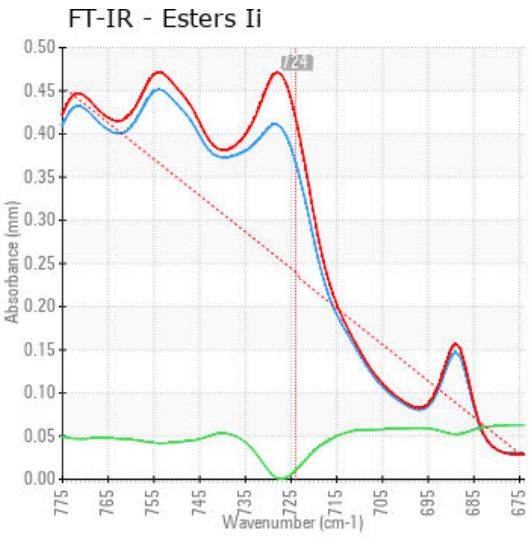
PASS

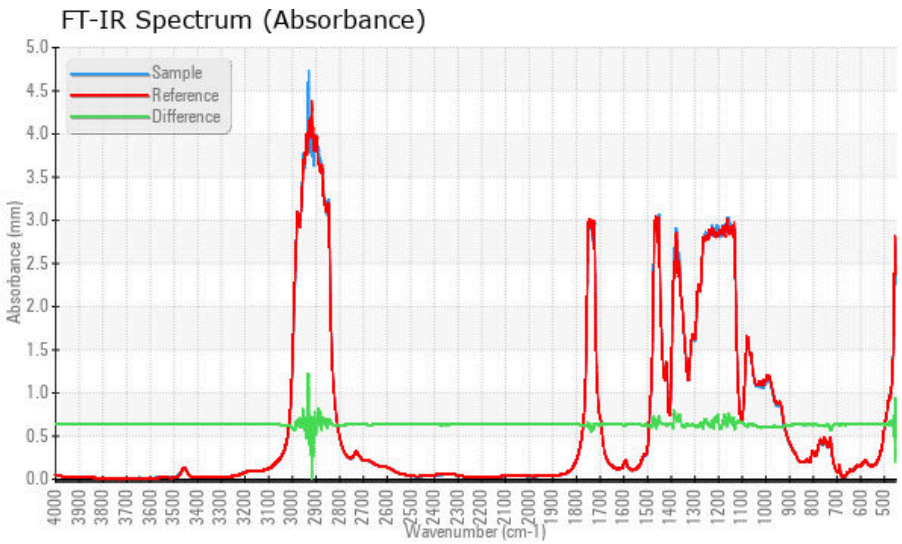
Area
GESTION ESC [02606658]
Machine Id
2006 CATERPILLAR CAT304C SC-738 (S/N FPK00458)
Component
Hydraulic System
Fluid
PANOLIN HLP SYNTH 46 (78 LTR)

SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	**75**	60	82
Mineral Oil Content	%	ASTM D7418*	<5.0%	**<5.0**	<5.0	0.0







ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC **Recieved** : 04 Jan 2024
Lab Number : 02606659 **Diagnosed** : 09 Jan 2024
Unique Number : 5707745 **Diagnostician** : Bill Quesnel
Test Package : MOB 2 (Additional Tests: TAN Man)

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

This page left intentionally blank