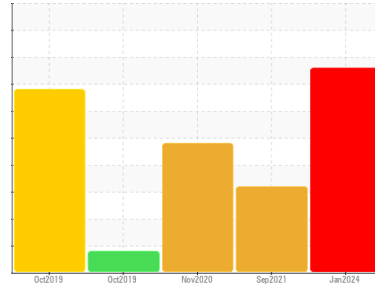




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
EQUIPMENTS LAFONTAINE INC [02609147]
 Machine Id
VOLVO EC480DL 210444
 Component
Hydraulic System
 Fluid
PANOLIN HLP SYNTH 46 (525 LTR)

DIAGNOSIS

Recommendation

Nous vous recommandons de vérifier la source de l'infiltration d'eau. Vérifier les scelles et/ou les filtres pour des points d'entrée des contaminants. 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. Nous recommandons le remplacement des filtres de ce composant. Échantillonner de nouveau dans 30 à 45 jours afin de contrôler la situation.

Wear

Usure de segment. Le bas indice ferreux (PQ) indique que l'usure ferreuse est due à de la corrosion.

Contamination

Il y a une grande quantité de limon (particules de 4 à 14 microns) dans l'huile. Il y a une faible concentration (<5.0%) d'huile minérale présente dans le fluide. Concentration modérée d'eau dans l'huile. 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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC	WC	WC
Sample Date	Client Info	15 Jan 2024	27 Sep 2021	25 Nov 2020
Machine Age	hrs	12378	9697	8404
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		SEVERE	SEVERE	SEVERE

WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184*	0	---	---	
Iron	ppm	ASTM D5185(m) >25	▲ 105	10	15
Chromium	ppm	ASTM D5185(m) >10	▲ 15	7	<1
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) >20	1	<1	<1
Lead	ppm	ASTM D5185(m) >20	1	<1	<1
Copper	ppm	ASTM D5185(m) >150	7	2	4
Tin	ppm	ASTM D5185(m) >10	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	0	0
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	3	2	3
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 0	0	0	1
Manganese	ppm	ASTM D5185(m) 0	<1	0	<1
Magnesium	ppm	ASTM D5185(m) 0	10	<1	▲ 21
Calcium	ppm	ASTM D5185(m) 0	▲ 26	2	▲ 39
Phosphorus	ppm	ASTM D5185(m) 1700	1497	1599	1363
Zinc	ppm	ASTM D5185(m) 0	▲ 108	38	▲ 73
Sulfur	ppm	ASTM D5185(m) 1350	1436	1413	1430
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

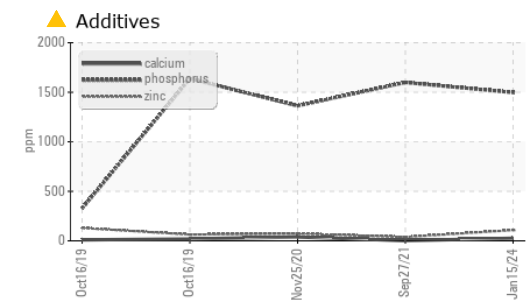
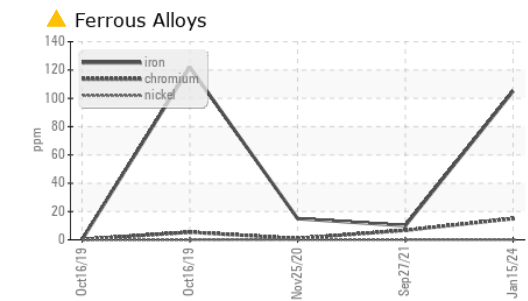
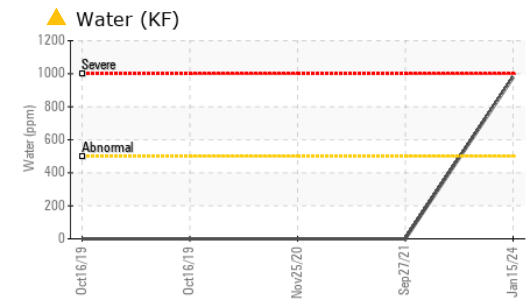
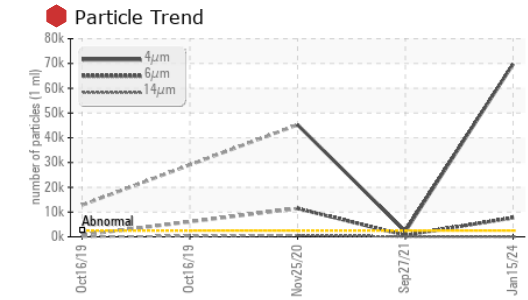
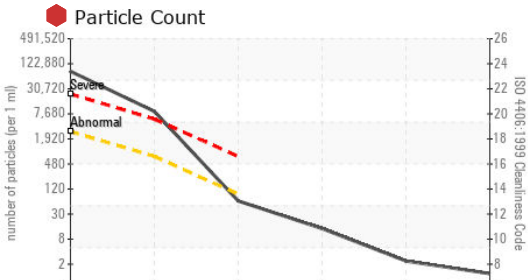
CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >50	2	2	2
Sodium	ppm	ASTM D5185(m)	2	2	2
Potassium	ppm	ASTM D5185(m) >20	<1	<1	<1
Water	%	ASTM D6304* >0.05	▲ 0.097	---	---
ppm Water	ppm	ASTM D6304* >500	▲ 979	---	---

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	0	---	---	
Nitration	Abs/cm	ASTM D7624*	5.2	---	---	
Sulfation	Abs/.1mm	ASTM D7415*	158.7	---	---	
Mineral Oil Content	%	ASTM D7418*	<5.0%	<5.0	0.0	1.6

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC
Lab Number : 02609151
Unique Number : 5710237
Test Package : MOB 2 (Additional Tests: PQ)
Received : 16 Jan 2024
Diagnosed : 22 Jan 2024
Diagnostician : 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.

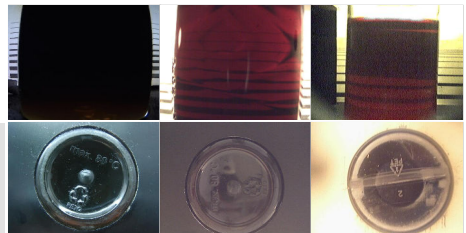
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	● 69772	2158	● 45238
Particles >6µm	ASTM D7647	>640	● 7676	632	● 11430
Particles >14µm	ASTM D7647	>80	55	71	▲ 636
Particles >21µm	ASTM D7647	>20	12	17	▲ 127
Particles >38µm	ASTM D7647	>4	2	1	5
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	● 23/20/13	18/16/13	● 23/21/16

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	159.1	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	1.96	● 4.77	2.70

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	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	46.2	46.2
Visc @ 100°C	cSt	ASTM D7279(m)	8.1	8.5	8.3
Viscosity Index (VI)	Scale	ASTM D2270*	146	163	156

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					





MINERAL OIL CONTENT REPORT

PASS



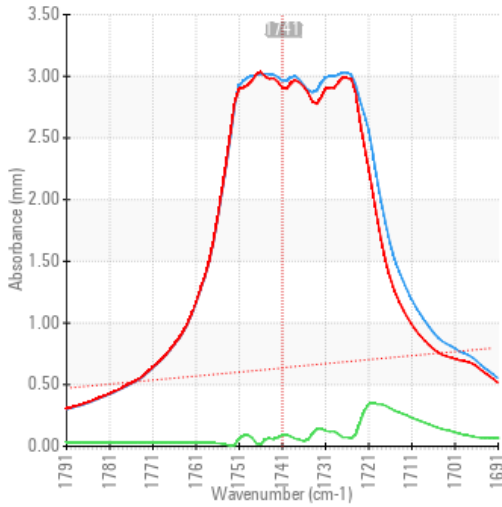
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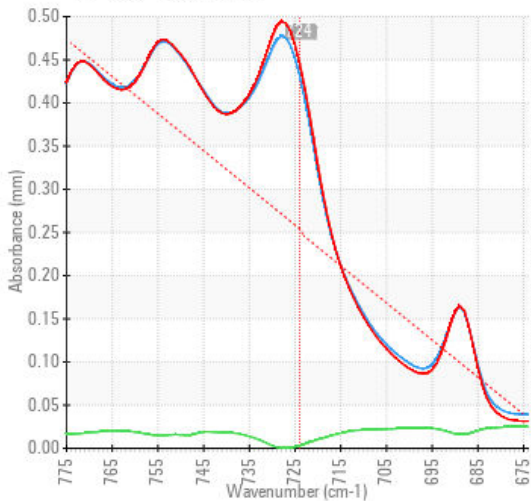
SPECTRAL ANALYSIS

		method	limit/base	current	history1	history2
Zinc	ppm	ASTM D5185(m)	0	▲ 108	38	▲ 73
Mineral Oil Content	%	ASTM D7418*	<5.0%	<5.0	0.0	1.6

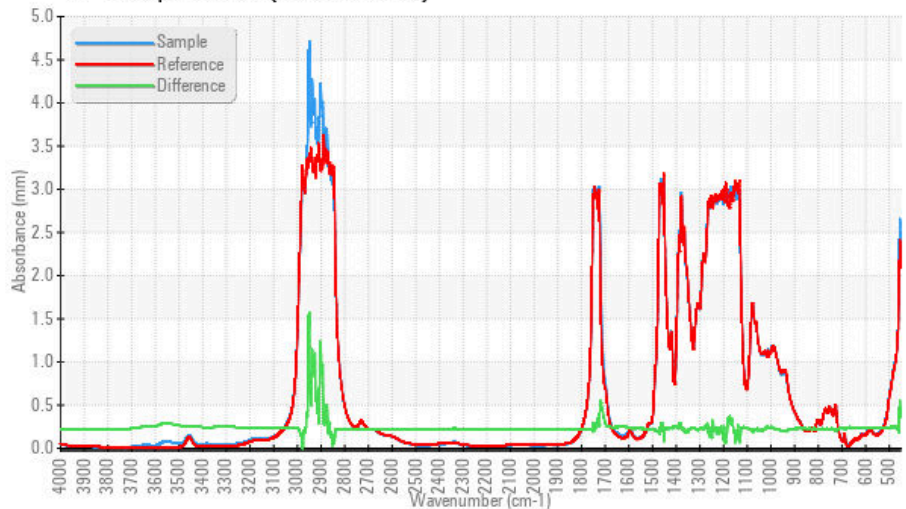
FT-IR - Esters I



FT-IR - Esters II



FT-IR Spectrum (Absorbance)



ISO 17025:2017
 Accredited
 Laboratory

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