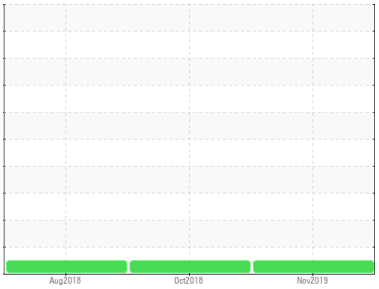
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
HAMEL CONSTRUCTION
Machine Id
VOLVO EC380EL 100236 (S/N 311184)
Component
Circulating Hydraulic System
Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (325 LTR)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition.

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

Contamination
La propreté du système est acceptable pour votre objectif de propreté ISO 4406. La propreté du système et du fluide est acceptable.

Fluid Condition
Les niveaux d`additifs indiquent l`ajout d`une autre marque ou d`un autre type d`huile. Le AN est acceptable pour ce fluide. L`état de l`huile permet d`en prolonger l`utilisation.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0005540**	PC385924	PC411028
Sample Date		Client Info		**04 Nov 2019**	25 Oct 2018	23 Aug 2018
Machine Age	hrs	Client Info		**2631**	1100	554
Oil Age	hrs	Client Info		**497**	1100	554
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>25	**5**	3	1
Chromium	ppm	ASTM D5185(m)	>10	**1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**<1**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	0
Lead	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>150	**17**	18	17
Tin	ppm	ASTM D5185(m)		**0**	0	0
Antimony	ppm	ASTM D5185(m)		**<1**	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	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**2**	<1	0
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Manganese	ppm	ASTM D5185(m)	1	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**6**	5	1
Calcium	ppm	ASTM D5185(m)	100	**94**	98	92
Phosphorus	ppm	ASTM D5185(m)	670	**391**	385	389
Zinc	ppm	ASTM D5185(m)	850	**481**	494	483
Sulfur	ppm	ASTM D5185(m)	1600	**1491**	950	928
Lithium	ppm	ASTM D5185(m)		**<1**	0	0

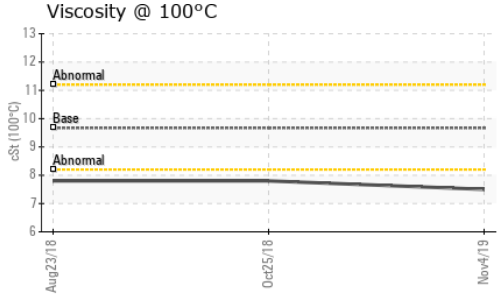
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**2**	<1	<1
Sodium	ppm	ASTM D5185(m)		**0**	<1	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>40000	**18201**	4122	8534
Particles >6µm		ASTM D7647	>10000	**4075**	509	3264
Particles >14µm		ASTM D7647	>2500	**318**	33	522
Particles >21µm		ASTM D7647	>640	**150**	9	159
Particles >38µm		ASTM D7647	>160	**6**	0	3
Particles >71µm		ASTM D7647	>40	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	**21/19/15**	19/16/12	20/19/16

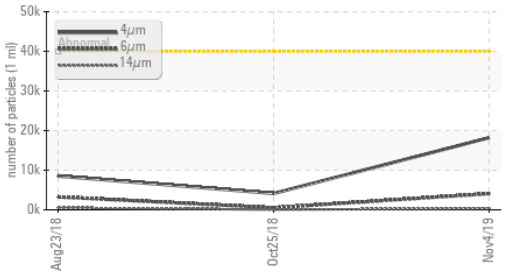
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.571**	0.563	0.52

OIL ANALYSIS REPORT

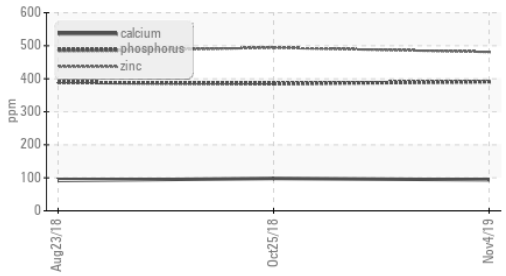
Viscosity @ 100°C



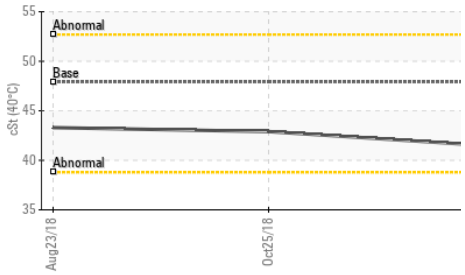
Particle Trend



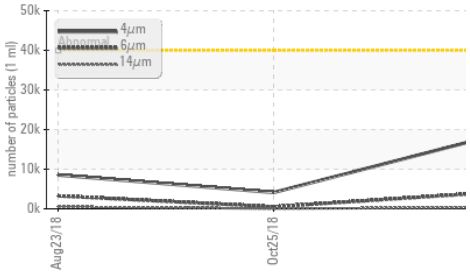
Additives



Viscosity @ 40°C



Particle Trend



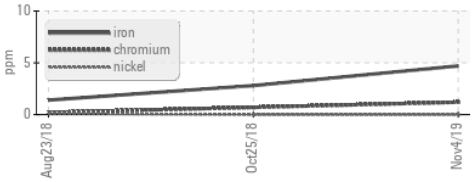
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	**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)	47.9	**41.5**	42.9	43.3
Visc @ 100°C	cSt	ASTM D7279(m)	9.67	**7.5**	7.8	7.8
Viscosity Index (VI)	Scale	ASTM D2270*	192	**149**	153	151

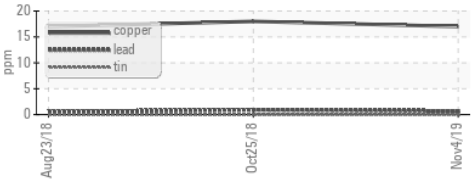
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

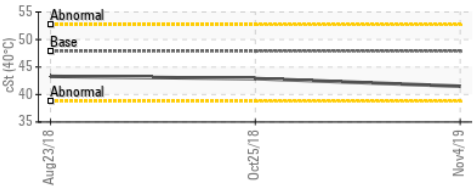
Ferrous Alloys



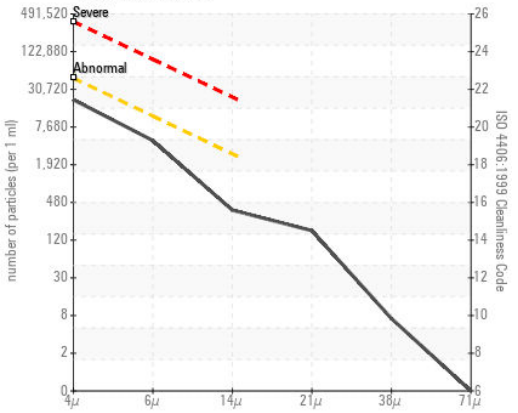
Non-ferrous Metals



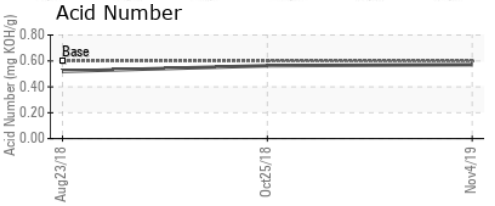
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0005540 **Received** : 18 Nov 2019
Lab Number : 02320673 **Diagnosed** : 19 Nov 2019
Unique Number : 4955968 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, VI)

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.

HUILES DESROCHES INC.
915 RUE PHILIPPE-PARADIS, LOCAL 115
QUEBEC, QC
CA G1N 4E3
Contact: David Labrecque
david.labrecque@groupedesroches.ca
T: (418)621-5150
F: (418)621-0822