OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL

Area
(123456789) Coal Yard
Machine Id
LIEBHERR A312 123456-1234
Component
Diesel Engine
Fluid
PETRO CANADA DURON EXTRA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. Light fuel dilution occurring. There is a high concentration of glycol present in the oil. No other contaminants were detected in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0010607**	---	---
Sample Date		Client Info		**01 Feb 2020**	---	---
Machine Age	hrs	Client Info		**18500**	---	---
Oil Age	hrs	Client Info		**528**	---	---
Oil Changed		Client Info		**Not Changd**	---	---
Sample Status				**SEVERE**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**36**	---	---
Chromium	ppm	ASTM D5185(m)	>5	**1**	---	---
Nickel	ppm	ASTM D5185(m)	>5	**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**<1**	---	---
Silver	ppm	ASTM D5185(m)		**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>15	**4**	---	---
Lead	ppm	ASTM D5185(m)	>30	**3**	---	---
Copper	ppm	ASTM D5185(m)	>125	**10**	---	---
Tin	ppm	ASTM D5185(m)	>5	**0**	---	---
Antimony	ppm	ASTM D5185(m)		**<1**	---	---
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)	0	**39**	---	---
Barium	ppm	ASTM D5185(m)	0	**<1**	---	---
Molybdenum	ppm	ASTM D5185(m)	60	**41**	---	---
Manganese	ppm	ASTM D5185(m)	0	**<1**	---	---
Magnesium	ppm	ASTM D5185(m)	1010	**511**	---	---
Calcium	ppm	ASTM D5185(m)	1070	**1489**	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	**910**	---	---
Zinc	ppm	ASTM D5185(m)	1270	**1053**	---	---
Sulfur	ppm	ASTM D5185(m)	2150	**3033**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>60	**9**	---	---
Sodium	ppm	ASTM D5185(m)		**15**	---	---
Potassium	ppm	ASTM D5185(m)	>20	▲ **9**	---	---
Fuel	%	ASTM D7593*	>5	**1.9**	---	---
Glycol	%	ASTM D7922*		⬢ **0.20**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.5**	---	---
Nitration	Abs/cm	ASTM D7624*	>20	**9.2**	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.2**	---	---

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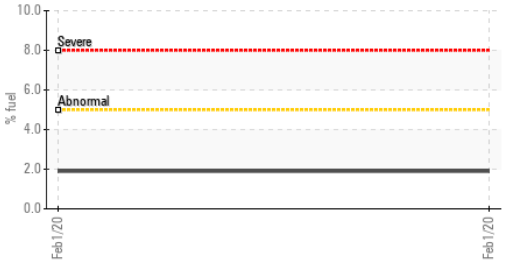
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.2**	---	---

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

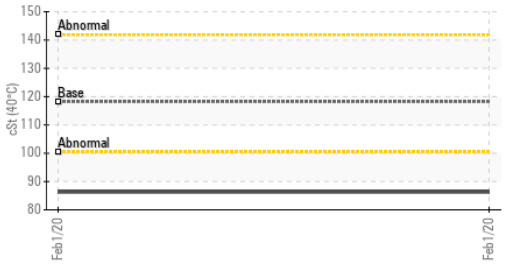
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	**86.3**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	**12.5**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	139	**141**	---	---

GRAPHS

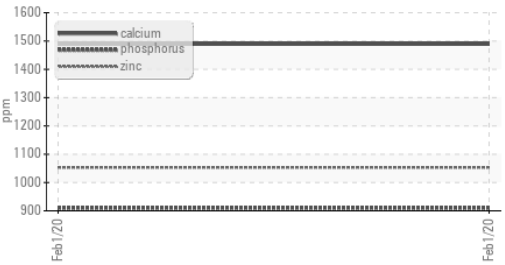
Fuel Dilution



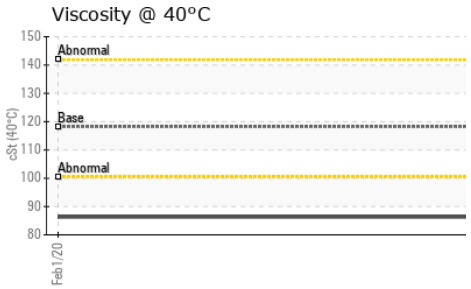
Viscosity @ 40°C



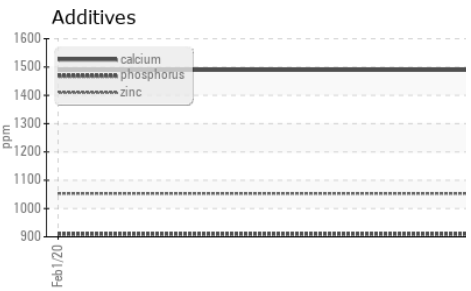
Additives



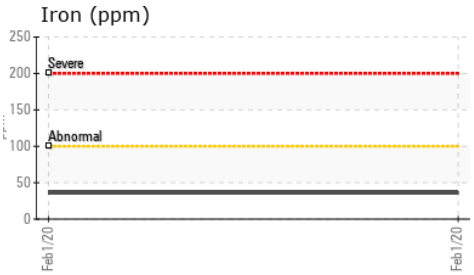
Viscosity @ 40°C



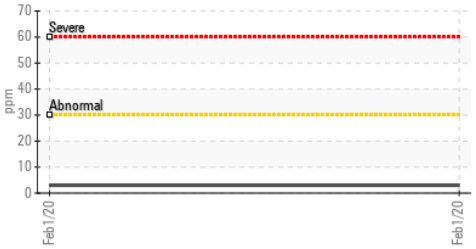
Additives



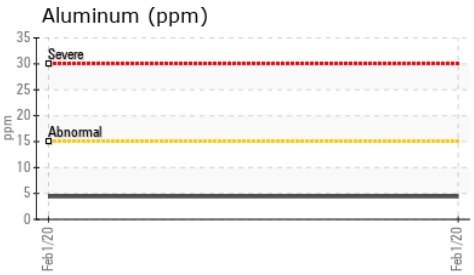
Iron (ppm)



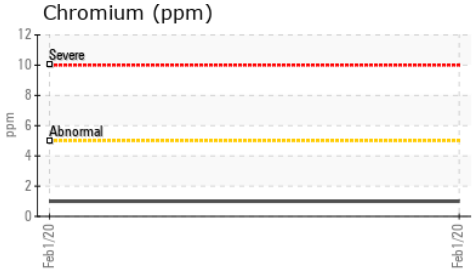
Lead (ppm)



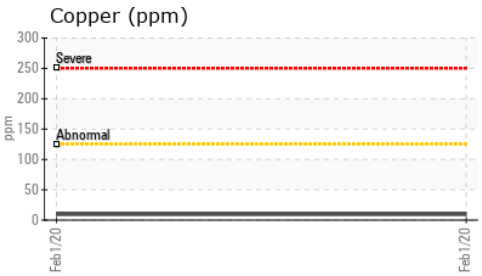
Aluminum (ppm)



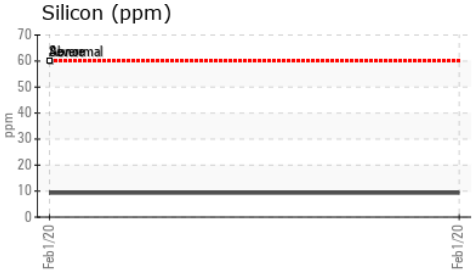
Chromium (ppm)



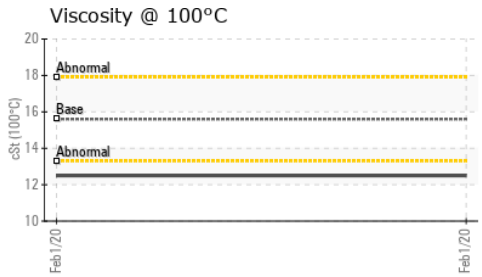
Copper (ppm)



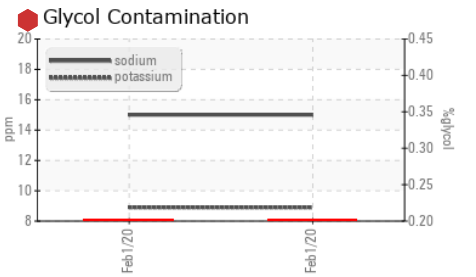
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0010607
Lab Number : 02279563
Unique Number : 4850802
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, VI)

Received : 02 Feb 2020
Diagnosed : 03 Feb 2020
Diagnostician : 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.

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Report Id: POLOAK [WCAMIS] 02279563 (Generated: 12/04/2023 18:57:02) Rev: 1

Submitted By: Bill Quesnel CLS OMA II