

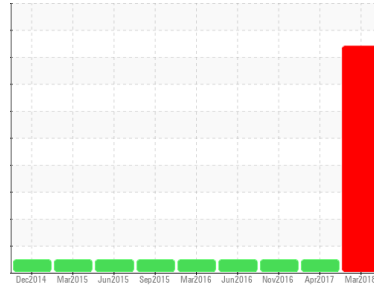
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
2013 FREIGHTLINER 7902
Component
Front Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (24 LTR)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number			PC417029	PC405514	PC403040
Sample Date			19 Mar 2018	24 Apr 2017	27 Nov 2016
Machine Age	hrs		12153	9949	8912
Oil Age	hrs		900	1200	0
Oil Changed			Changed	Changed	N/A
Sample Status			SEVERE	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185 >50	35	9	9
Chromium	ppm	ASTM D5185 >4	2	<1	<1
Nickel	ppm	ASTM D5185 >2	1	<1	<1
Titanium	ppm	ASTM D5185	<1	0	0
Silver	ppm	ASTM D5185 >3	0	0	0
Aluminum	ppm	ASTM D5185 >9	5	2	2
Lead	ppm	ASTM D5185 >30	19	14	2
Copper	ppm	ASTM D5185 >35	50	45	13
Tin	ppm	ASTM D5185 >4	<1	<1	<1
Antimony	ppm	ASTM D5185	2	2	2
Vanadium	ppm	ASTM D5185	<1	0	0
Beryllium	ppm	ASTM D5185	0	0	0
Cadmium	ppm	ASTM D5185	0	0	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185 120	11	10	8
Barium	ppm	ASTM D5185	<1	<1	<1
Molybdenum	ppm	ASTM D5185 125	143	127	115
Manganese	ppm	ASTM D5185	1	<1	<1
Magnesium	ppm	ASTM D5185	17	8	7
Calcium	ppm	ASTM D5185 2100	2164	2155	2111
Phosphorus	ppm	ASTM D5185 800	773	694	695
Zinc	ppm	ASTM D5185 880	891	890	869
Sulfur	ppm	ASTM D5185 2860	3027	2271	2233
Lithium	ppm	ASTM D5185	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185 >+100	10	5	15
Sodium	ppm	ASTM D5185	571	6	1
Potassium	ppm	ASTM D5185 >20	187	1	<1
Glycol	%	ASTM D2982	0.10	---	---

INFRA-RED

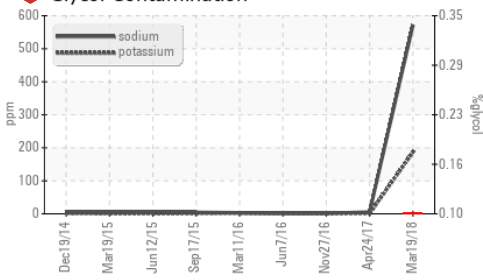
	method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7686	0	0	0
Nitration	Abs/cm	ASTM D7624 >25	11.8	10.3	8.7
Sulfation	Abs/.1mm	ASTM D7415 >35	33.3	26.1	23.8

FLUID DEGRADATION

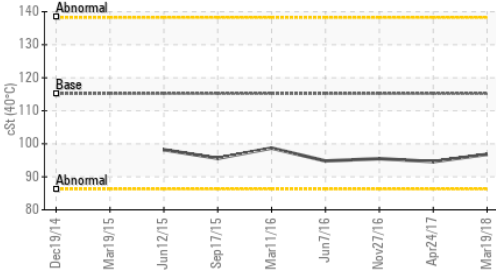
	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414 >25	24.6	13.5	11.6

OIL ANALYSIS REPORT

Glycol Contamination



Viscosity @ 40°C

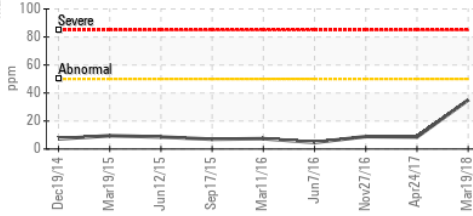


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	Visual	NONE	VLITE	---
Yellow Metal	scalar	Visual	NONE	NONE	---
Precipitate	scalar	Visual	NONE	NONE	---
Silt	scalar	Visual	NONE	NONE	---
Debris	scalar	Visual	NONE	VLITE	---
Sand/Dirt	scalar	Visual	NONE	NONE	---
Appearance	scalar	Visual	NORML	NORML	---
Odor	scalar	Visual	NORML	NORML	---
Emulsified Water	scalar	Visual	>0.1	NEG	NEG
Free Water	scalar	Visual		NEG	NEG

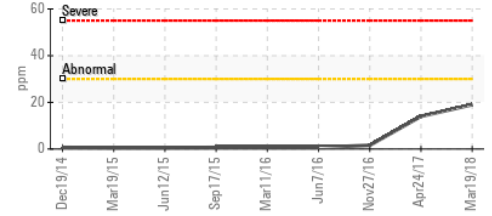
FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279	115.2	96.8	94.6
Visc @ 100°C	cSt	ASTM D7279	15.4	12.9	13.4
Viscosity Index (VI)	Scale	ASTM D2270	140	130	141

GRAPHS

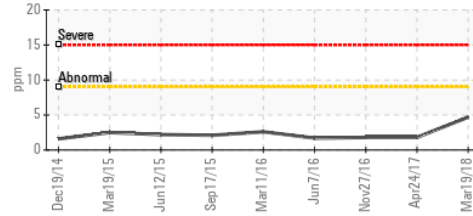
Iron (ppm)



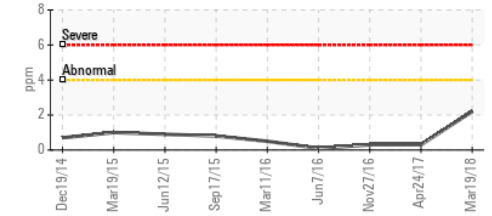
Lead (ppm)



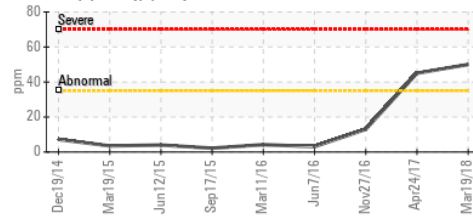
Aluminum (ppm)



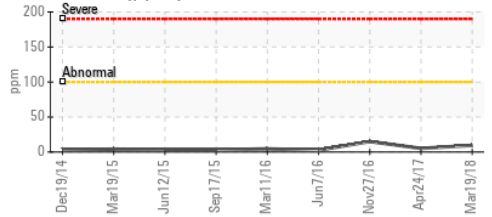
Chromium (ppm)



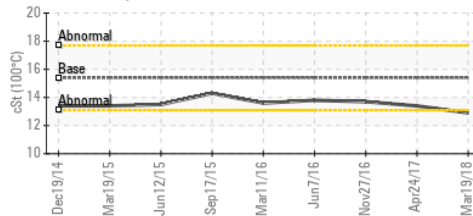
Copper (ppm)



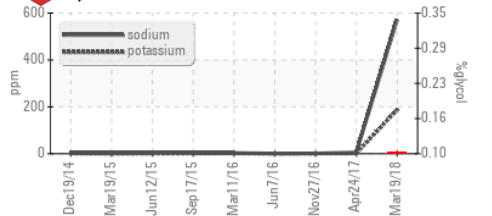
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 25 Apr 2018
Lab Number : 01234567 **Diagnosed** : 26 Apr 2018
Unique Number : 12345678 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KV40, VI, Visual)

*To discuss diagnosis or test data, contact Technical Support at 1-800-268-2131.
 To change component or sample information, contact Customer Service at 1-800-268-2131.*

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