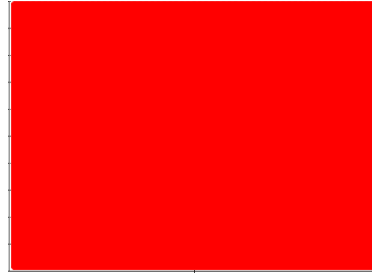


Area
SHARP BUS LINES
Machine Id
INTERNATIONAL 1163

Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. 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. We recommend an early resample to monitor this condition.

Wear

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

Contamination

Test for glycol is positive. There is a high amount of fuel present in the oil. There is a high concentration of glycol present in the oil. Light concentration of carbon/soot present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info	PC0081504	---	---
Sample Date	Client Info	13 Oct 2023	---	---
Machine Age	kms Client Info	185635	---	---
Oil Age	kms Client Info	2000	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		SEVERE	---	---

WEAR METALS method limit/base current history1 history2

PQ	ASTM D8184*		0	---	---
Iron	ppm ASTM D5185(m)	>100	▲ 129	---	---
Chromium	ppm ASTM D5185(m)	>20	2	---	---
Nickel	ppm ASTM D5185(m)	>4	<1	---	---
Titanium	ppm ASTM D5185(m)		0	---	---
Silver	ppm ASTM D5185(m)	>3	<1	---	---
Aluminum	ppm ASTM D5185(m)	>20	11	---	---
Lead	ppm ASTM D5185(m)	>40	4	---	---
Copper	ppm ASTM D5185(m)	>330	4	---	---
Tin	ppm ASTM D5185(m)	>15	0	---	---
Antimony	ppm ASTM D5185(m)		0	---	---
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	4	---	---
Barium	ppm ASTM D5185(m)	0	<1	---	---
Molybdenum	ppm ASTM D5185(m)	60	60	---	---
Manganese	ppm ASTM D5185(m)	0	<1	---	---
Magnesium	ppm ASTM D5185(m)	1010	889	---	---
Calcium	ppm ASTM D5185(m)	1070	958	---	---
Phosphorus	ppm ASTM D5185(m)	1150	928	---	---
Zinc	ppm ASTM D5185(m)	1270	1103	---	---
Sulfur	ppm ASTM D5185(m)	2060	2270	---	---
Lithium	ppm ASTM D5185(m)		<1	---	---

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm ASTM D5185(m)	>25	6	---	---
Sodium	ppm ASTM D5185(m)		9	---	---
Potassium	ppm ASTM D5185(m)	>20	▲ 10	---	---
Fuel	% ASTM D7593*	>2.0	● 6.6	---	---
Glycol	% ASTM D7922*		● 0.184	---	---

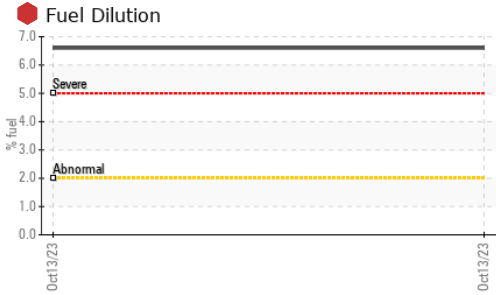
INFRA-RED method limit/base current history1 history2

Soot %	% ASTM D7844*	>3	▲ 4	---	---
Nitration	Abs/cm ASTM D7624*	>20	16.2	---	---
Sulfation	Abs/.1mm ASTM D7415*	>30	33.1	---	---

FLUID DEGRADATION method limit/base current history1 history2

Oxidation	Abs/.1mm ASTM D7414*	>25	24.7	---	---
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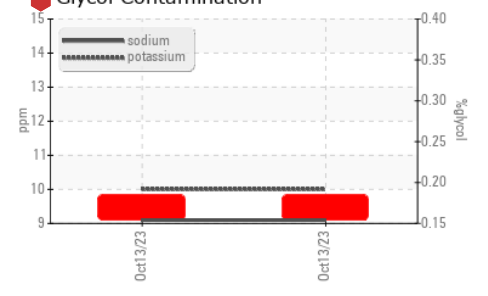
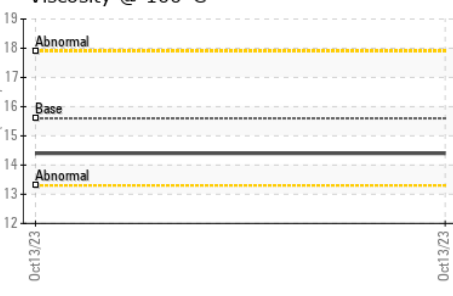
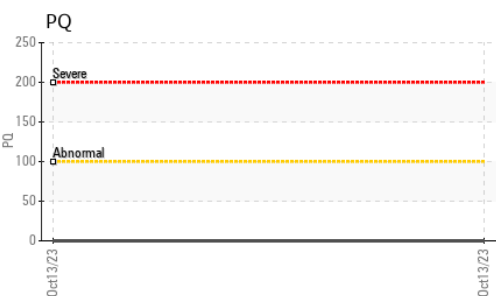
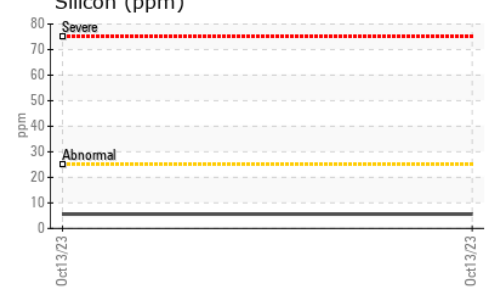
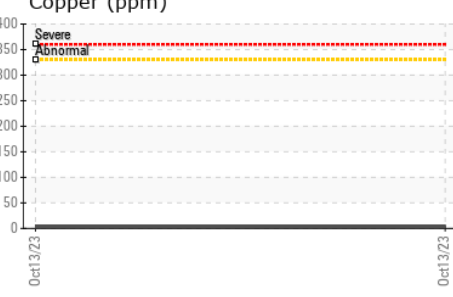
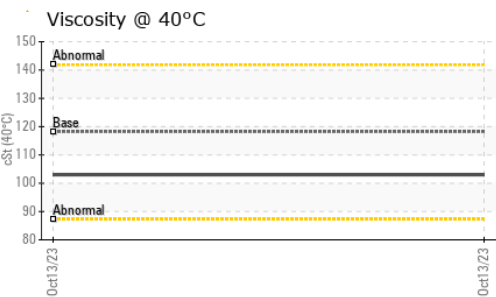
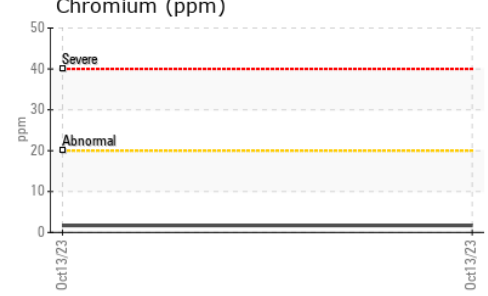
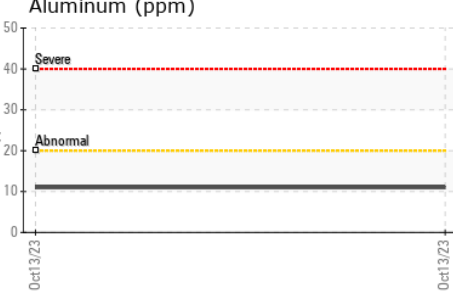
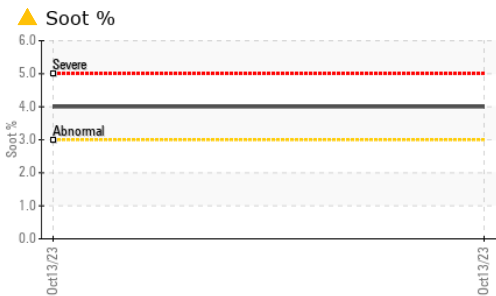
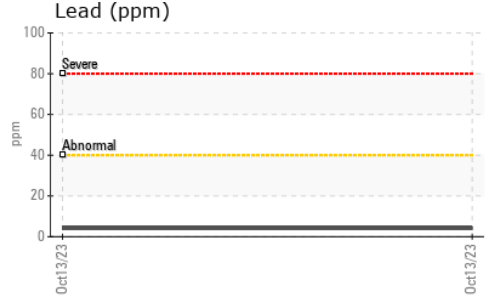
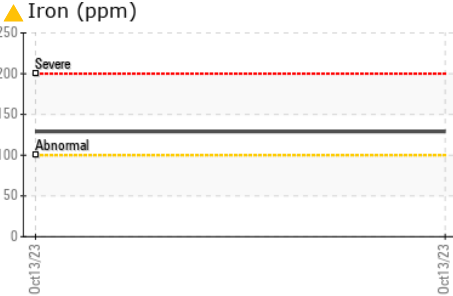
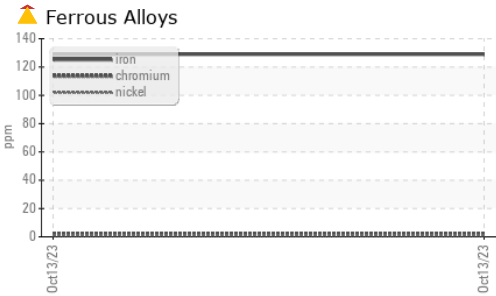
OIL ANALYSIS REPORT



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	103	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	14.4	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	139	143	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0081504 **Received** : 25 Oct 2023
Lab Number : **02591906** **Diagnosed** : 27 Oct 2023
Unique Number : 5668985 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, PQ, VI)

ICSB - Brantford
 567 Oak Park Rd.
 Brantford, ON
 CA N3T 5L8
 Contact: Doug Hall
 Djhall@sharpbus.com
 T: (519)751-3434
 F:

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.