

Machine Id
64
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0083568	PC0071717	PC0032758
Sample Date		Client Info		22 May 2024	28 Jun 2023	27 Nov 2022
Machine Age	kms	Client Info		95956	82000	73348
Oil Age	kms	Client Info		8500	8000	8000
Filter Age	kms	Client Info		0	8000	8000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>200	13	14	10
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	1	1	2
Lead	ppm	ASTM D5185(m)	>30	1	8	3
Copper	ppm	ASTM D5185(m)	>30	1	2	<1
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

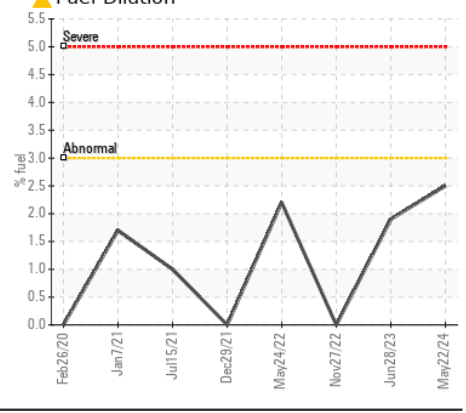
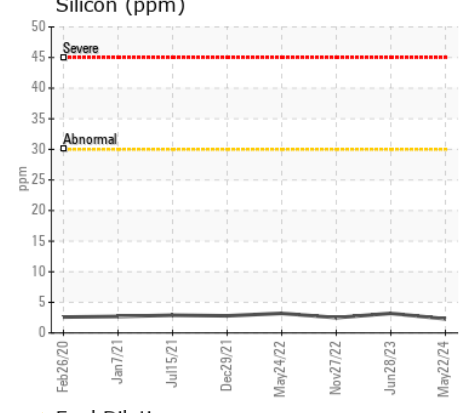
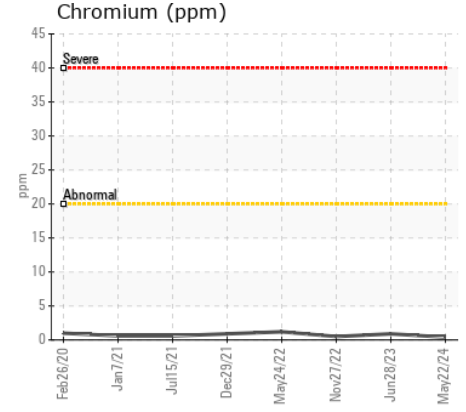
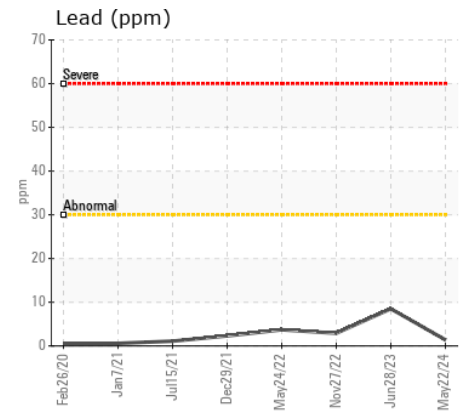
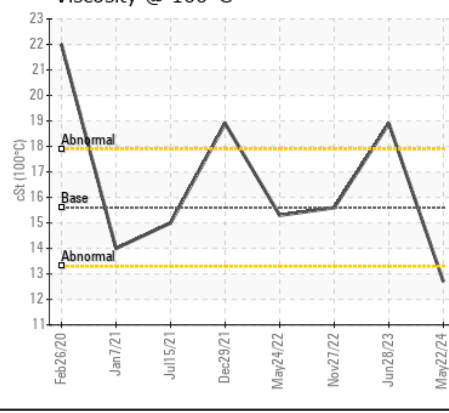
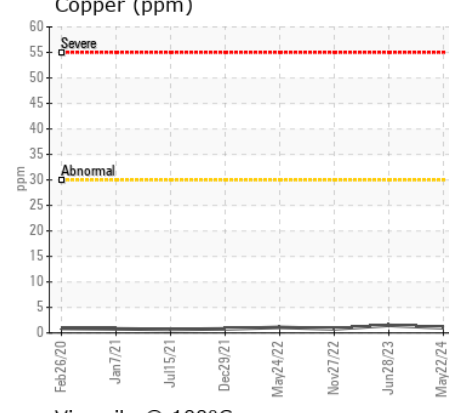
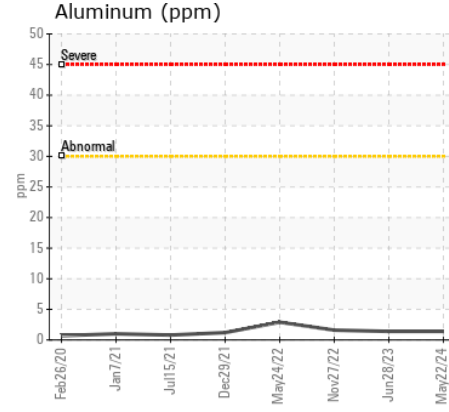
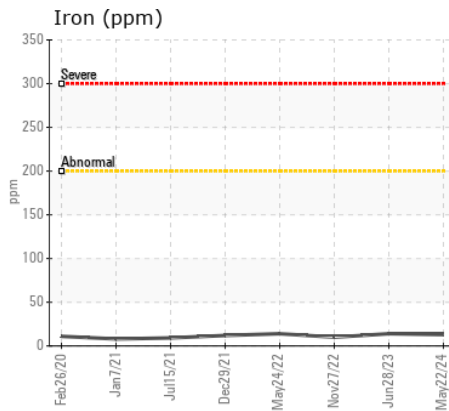
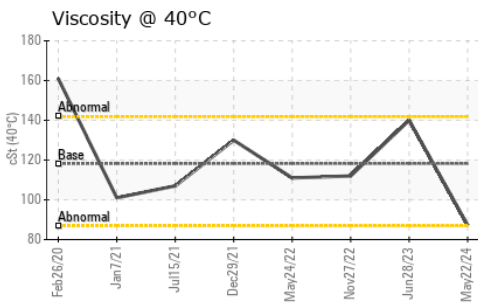
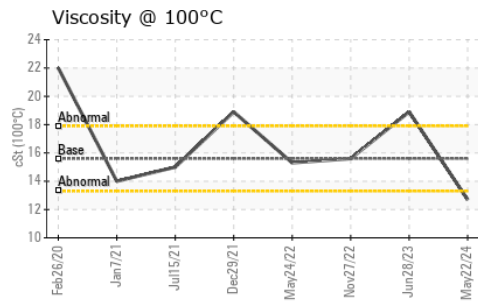
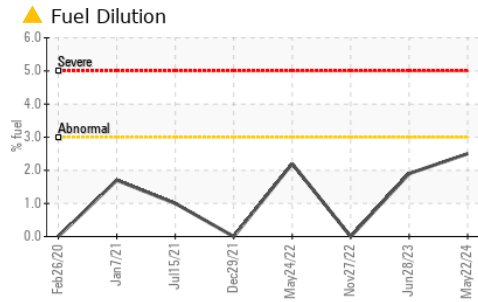
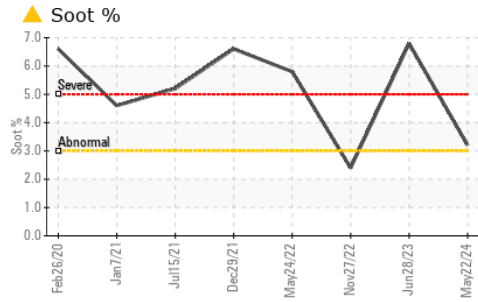
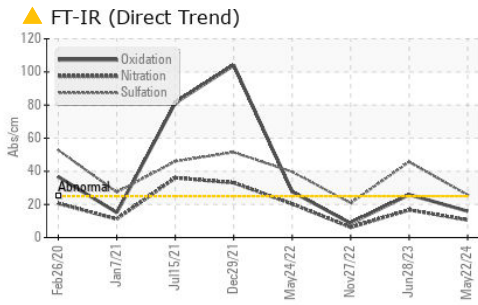
Light fuel dilution occurring. Light concentration of carbon/soot present in the oil. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>30	2	3	2
Potassium	ppm	ASTM D5185(m)	>20	0	<1	0
Fuel	%	ASTM D7593*	>3.0	▲ 2.5	▲ 1.9	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	▲ 3.2	▲ 6.8	2.4
Nitration	Abs/cm	ASTM D7624*	>20	10.6	16.7	6.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.8	45.6	20.8
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		2	2	1
Boron	ppm	ASTM D5185(m)	0	13	7	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	55	56
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	919	910	957
Calcium	ppm	ASTM D5185(m)	1070	1122	1159	1076
Phosphorus	ppm	ASTM D5185(m)	1150	1007	1078	1083
Zinc	ppm	ASTM D5185(m)	1270	1160	1192	1155
Sulfur	ppm	ASTM D5185(m)	2060	2569	2589	2589
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.9	25.9	8.6
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	87.3	140	112
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	12.7	▲ 18.9	15.6
Viscosity Index (VI)	Scale	ASTM D2270*	139	143	152	147



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0083568
Lab Number : 02637911
Unique Number : 5787073
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI, Visual)
Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

BEAVER BUS LINES
 339, ACHIBAULD ST
 WINNIPEG, MB
 CA R2J 0W6
 Contact: Roger Roman
 roger@beaverbus.com
 T: (204)989-7033
 F: (204)237-2645

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.