



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
63
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.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

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

FLUID CONDITION

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

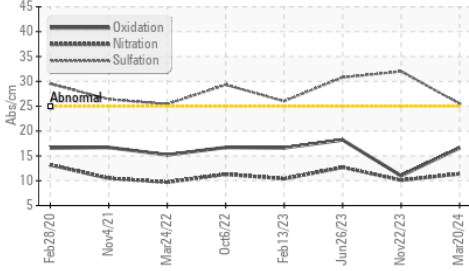
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0078275	PC0071675	PC0071707
Sample Date		Client Info		20 Mar 2024	22 Nov 2023	26 Jun 2023
Machine Age	kms	Client Info		49812	112979	36297
Oil Age	kms	Client Info		8000	8000	8000
Filter Age	kms	Client Info		8000	8000	8000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

Iron	ppm	ASTM D5185(m)	>200	12	17	17
Chromium	ppm	ASTM D5185(m)	>20	<1	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	<1	2	2
Lead	ppm	ASTM D5185(m)	>30	<1	2	3
Copper	ppm	ASTM D5185(m)	>30	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

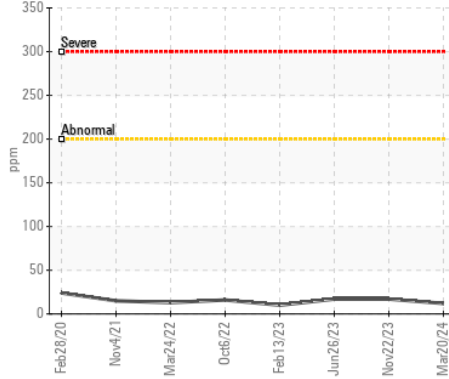
Silicon	ppm	ASTM D5185(m)	>30	2	4	3
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
Fuel	%	ASTM D7593*	>3.0	▲ 1.6	1.4	1.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	▲ 3.1	▲ 4.4	▲ 4.7
Nitration	Abs/cm	ASTM D7624*	>20	11.4	10.1	12.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.5	32.0	30.8
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

Sodium	ppm	ASTM D5185(m)		2	2	3
Boron	ppm	ASTM D5185(m)	0	9	3	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	61	58	58
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	973	997	1012
Calcium	ppm	ASTM D5185(m)	1070	1114	1076	1069
Phosphorus	ppm	ASTM D5185(m)	1150	1013	1011	1105
Zinc	ppm	ASTM D5185(m)	1270	1189	1203	1214
Sulfur	ppm	ASTM D5185(m)	2060	2542	2528	2581
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.6	11.0	18.2
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	100	118	122
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	14.1	15.8	▲ 16.4
Viscosity Index (VI)	Scale	ASTM D2270*	139	143	141	144

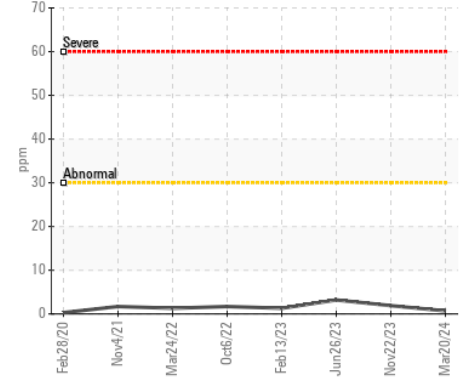
▲ FT-IR (Direct Trend)



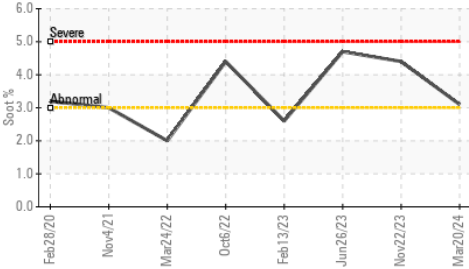
Iron (ppm)



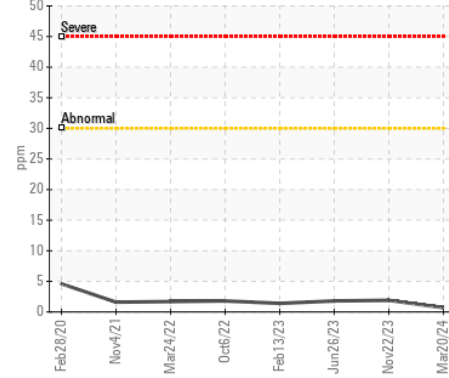
Lead (ppm)



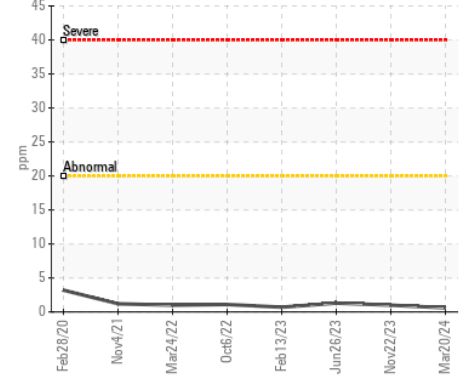
▲ Soot %



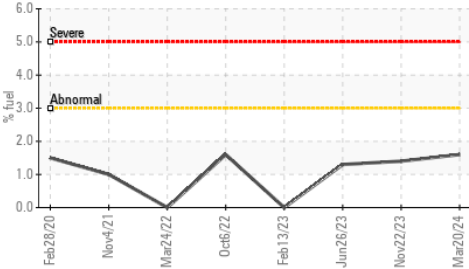
Aluminum (ppm)



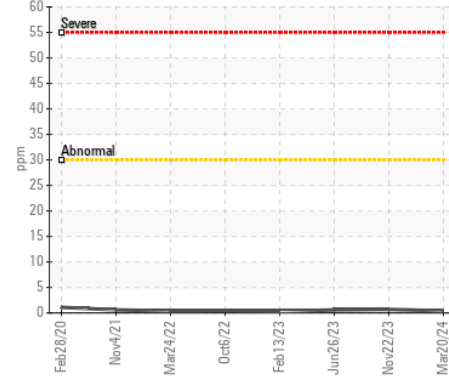
Chromium (ppm)



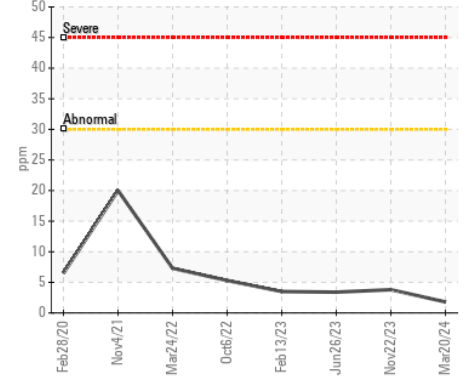
▲ Fuel Dilution



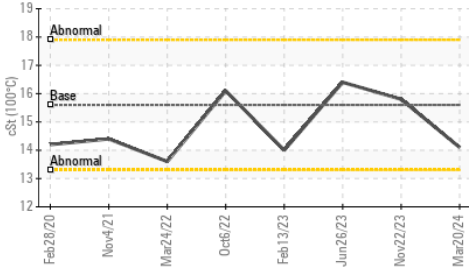
Copper (ppm)



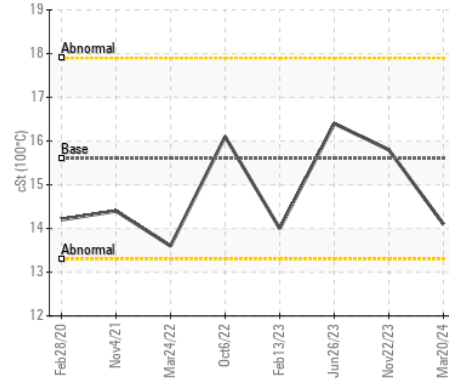
Silicon (ppm)



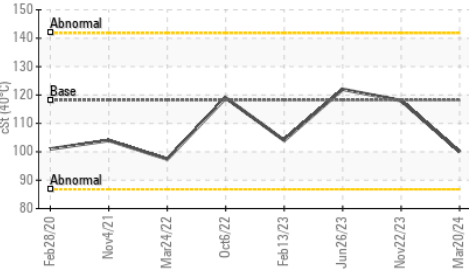
Viscosity @ 100°C



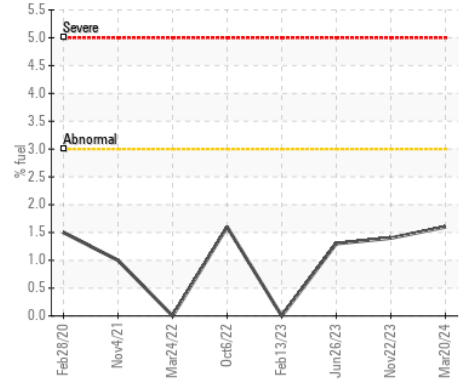
Viscosity @ 100°C



Viscosity @ 40°C



▲ Fuel Dilution



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078275
Lab Number : 02628101
Unique Number : 5761233
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

Received : 11 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 12 Apr 2024 - Wes Davis

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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.