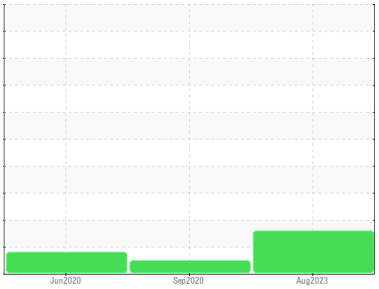
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
DR165
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W40 (20 LTR)

DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0078033**	PC0037423	PC0031234
Sample Date		Client Info		**01 Aug 2023**	18 Sep 2020	02 Jun 2020
Machine Age	hrs	Client Info		**15045**	14676	14410
Oil Age	hrs	Client Info		**0**	14410	0
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**14**	11	7
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**0**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	1	0
Aluminum	ppm	ASTM D5185(m)	>20	**1**	1	1
Lead	ppm	ASTM D5185(m)	>40	**1**	4	0
Copper	ppm	ASTM D5185(m)	>330	**1**	4	<1
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	65	**44**	17	53
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	65	**57**	46	60
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	**1067**	798	1136
Calcium	ppm	ASTM D5185(m)	820	**843**	1559	916
Phosphorus	ppm	ASTM D5185(m)	1160	**1063**	1101	1101
Zinc	ppm	ASTM D5185(m)	1260	**1196**	1269	1276
Sulfur	ppm	ASTM D5185(m)	3000	**2772**	3119	3078
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

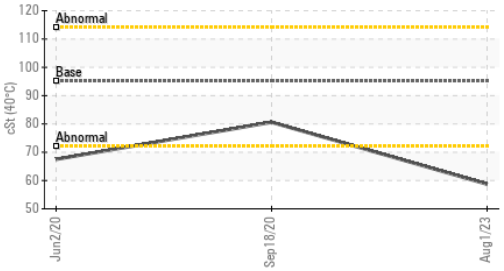
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**8**	5	5
Sodium	ppm	ASTM D5185(m)		**4**	2	2
Potassium	ppm	ASTM D5185(m)	>20	**1**	<1	<1
Fuel	%	ASTM D7593*	>5	▲ **6.6**	<1.0	1.9

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.1**	0.2	0
Nitration	Abs/cm	ASTM D7624*	>20	**8.9**	7.9	9.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.2**	20.4	24.5

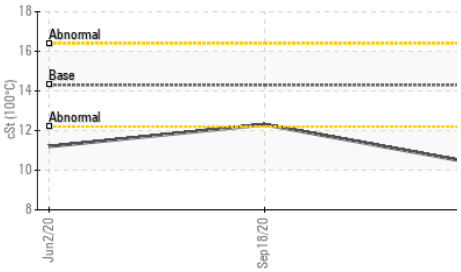
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.2**	16.3	17.1

OIL ANALYSIS REPORT

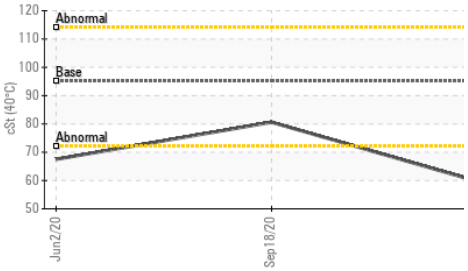
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

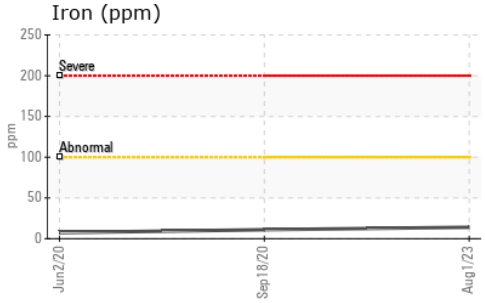


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

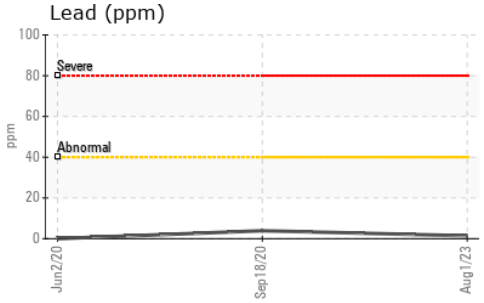
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	▲ **58.7**	80.6	▲ 67.5
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	▲ **10.3**	12.3	▲ 11.2
Viscosity Index (VI)	Scale	ASTM D2270*	169	**165**	149	159

GRAPHS

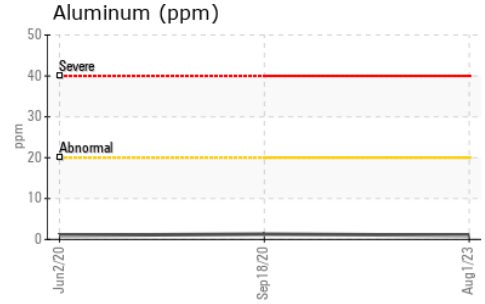
Iron (ppm)



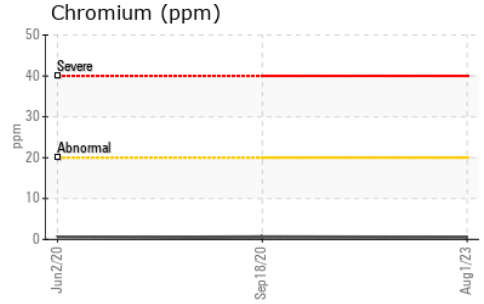
Lead (ppm)



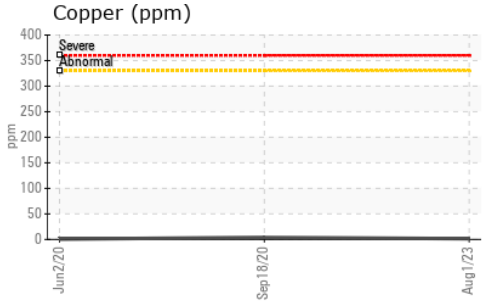
Aluminum (ppm)



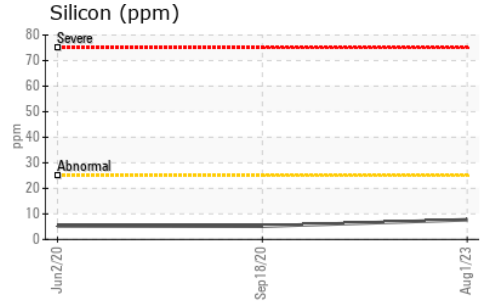
Chromium (ppm)



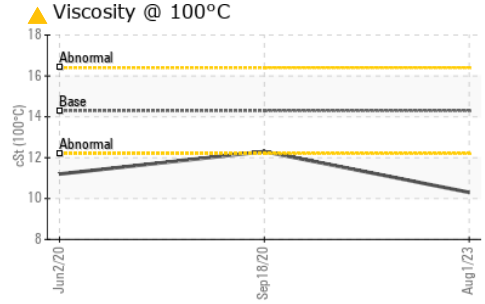
Copper (ppm)



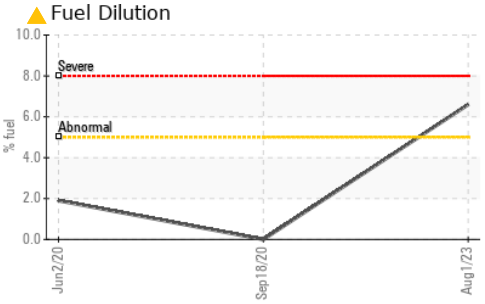
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078033
Lab Number : 02578741
Unique Number : 5631801
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

Received : 28 Aug 2023
Diagnosed : 29 Aug 2023
Diagnostician : Wes Davis

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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