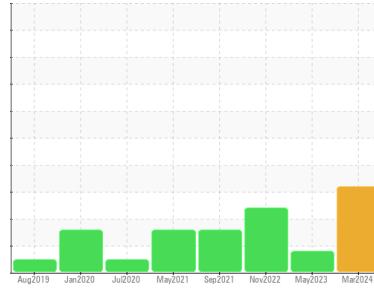




Machine Id
OR501

Component
Diesel Engine

Fluid
PETRO CANADA DURON UHP 5W40 (5 LTR)



DIAGNOSIS

▲ Recommendation
We advise that you check the fuel injection system. 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
There is a high 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			PC0078479	PC0058477	PC0056637
Sample Date	Client Info			12 Mar 2024	10 May 2023	18 Nov 2022
Machine Age	hrs	Client Info		5802	4870	4378
Oil Age	hrs	Client Info		0	500	0
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				SEVERE	MARGINAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	28	42	▲ 109
Chromium	ppm	ASTM D5185(m)	>20	<1	1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	4	4	7
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	2	3	5
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
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

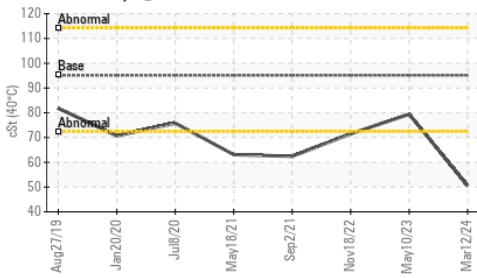
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	65	22	34	22
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	65	48	59	55
Manganese	ppm	ASTM D5185(m)	0	0	<1	1
Magnesium	ppm	ASTM D5185(m)	1160	863	1113	1004
Calcium	ppm	ASTM D5185(m)	820	687	884	801
Phosphorus	ppm	ASTM D5185(m)	1160	776	1076	931
Zinc	ppm	ASTM D5185(m)	1260	902	1221	1134
Sulfur	ppm	ASTM D5185(m)	3000	2216	2824	2583
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4	6	11
Sodium	ppm	ASTM D5185(m)		4	7	10
Potassium	ppm	ASTM D5185(m)	>20	1	1	4
Fuel	%	ASTM D7593*	>5	▲ 19.8	▲ 4.4	▲ 7.1

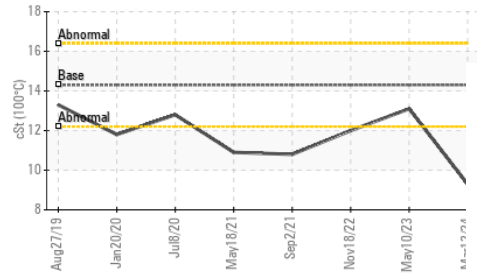
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.7	0.4	1.1
Nitration	Abs/cm	ASTM D7624*	>20	12.0	11.7	13.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.2	21.6	25.0

OIL ANALYSIS REPORT

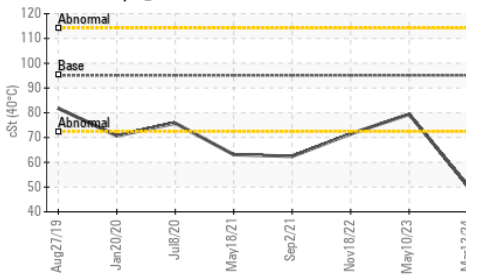
▲ Viscosity @ 40°C



▲ Viscosity @ 100°C



▲ Viscosity @ 40°C

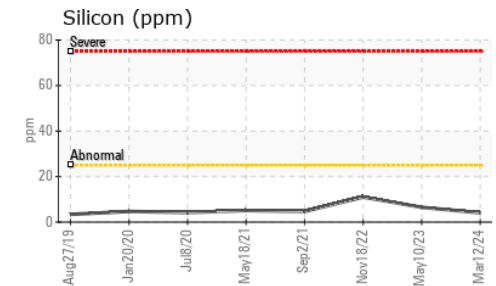
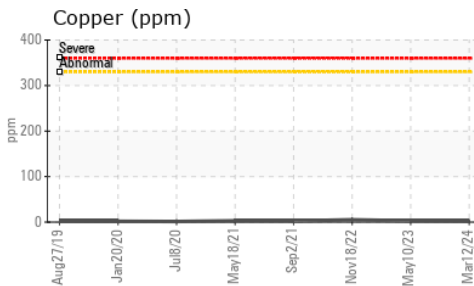
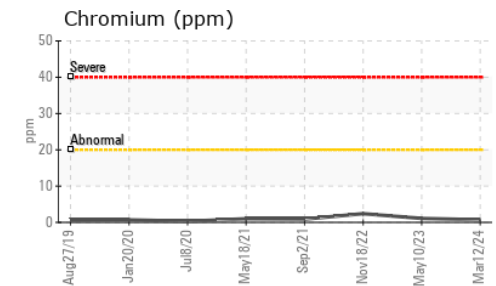
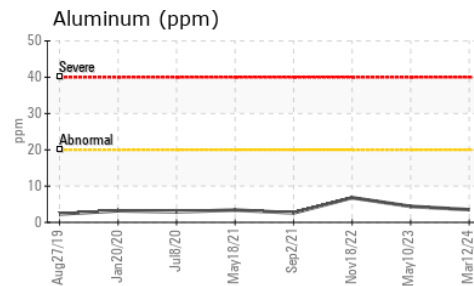
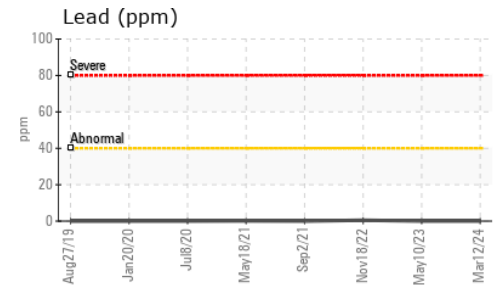
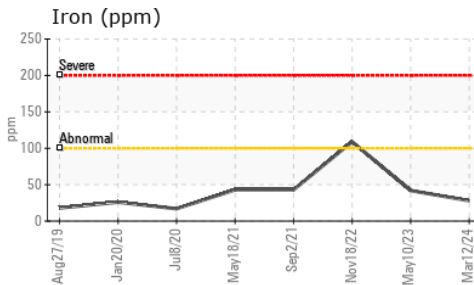


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	20.6	21.8	23.8

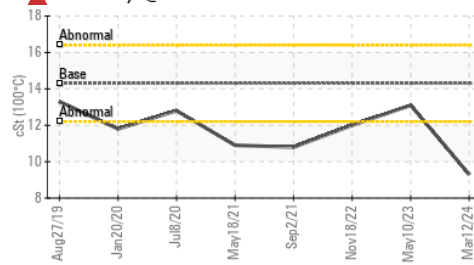
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	▲ 50.6	79.4	▲ 71.5
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	▲ 9.3	13.1	▲ 12.0
Viscosity Index (VI)	Scale	ASTM D2270*	169	168	166	165

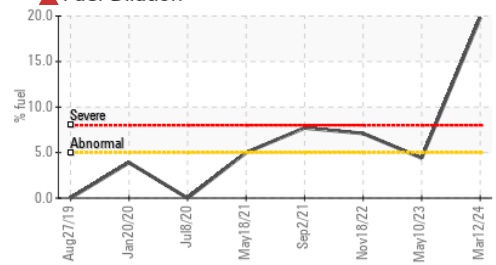
GRAPHS



▲ Viscosity @ 100°C



▲ Fuel Dilution



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078479
Lab Number : 02622642
Unique Number : 5747761
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
 151 Ram Forest Rd,
 Stouffville, ON
 CA L4A 2G8
 Contact: Shannon Abbott
 sabbott@gipi.com
 T: (905)750-5900
 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.