

Machine Id

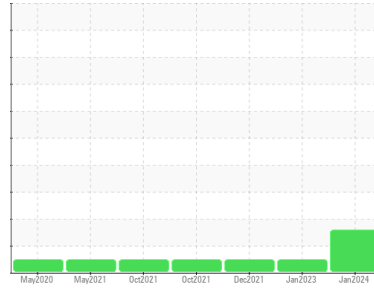
ST277

Component

Diesel Engine

Fluid

PETRO CANADA DURON UHP 5W40 (40 LTR)



DIAGNOSIS

Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter 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 moderate concentration of dirt present in the oil.

Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0078373	PC0061818	PC0057092
Sample Date	Client Info			24 Jan 2024	06 Jan 2023	07 Dec 2021
Machine Age	hrs	Client Info		6165	0	0
Oil Age	hrs	Client Info		500	0	0
Oil Changed	Client Info			Changed	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

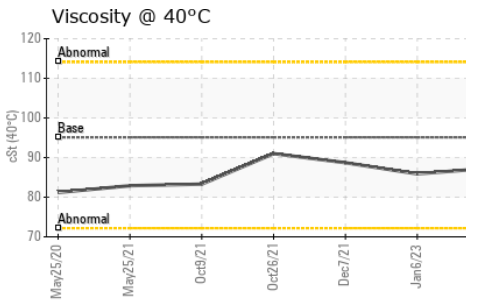
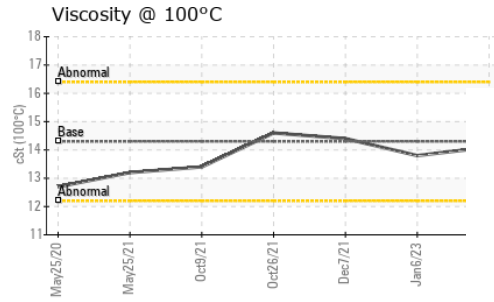
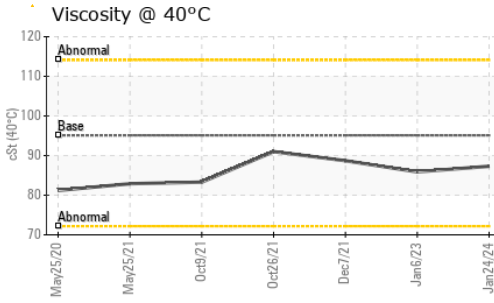
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	9	21	5
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	<1
Lead	ppm	ASTM D5185(m)	>40	<1	1	0
Copper	ppm	ASTM D5185(m)	>330	3	8	2
Tin	ppm	ASTM D5185(m)	>15	<1	<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	37	29	50
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	65	57	58	56
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	1065	1104	1127
Calcium	ppm	ASTM D5185(m)	820	810	866	803
Phosphorus	ppm	ASTM D5185(m)	1160	983	1083	1047
Zinc	ppm	ASTM D5185(m)	1260	1136	1233	1204
Sulfur	ppm	ASTM D5185(m)	3000	2838	2796	2791
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	▲ 51	4	4
Sodium	ppm	ASTM D5185(m)		4	5	4
Potassium	ppm	ASTM D5185(m)	>20	1	3	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.1	0.2	0
Nitration	Abs/cm	ASTM D7624*	>20	8.8	10.1	7.5
Sulfation	Abs.1mm	ASTM D7415*	>30	20.7	22.6	19.9

OIL ANALYSIS REPORT

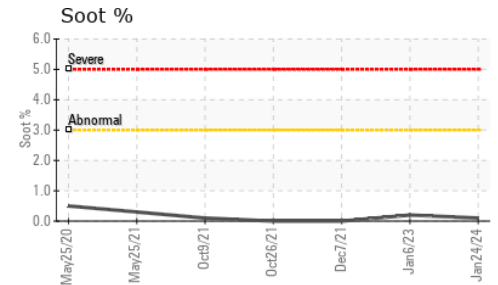
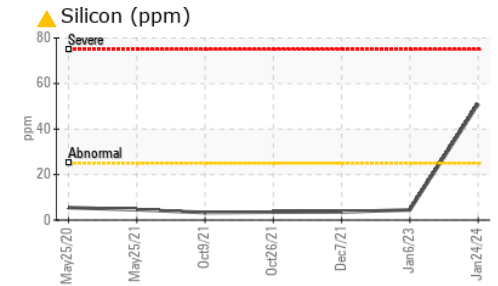
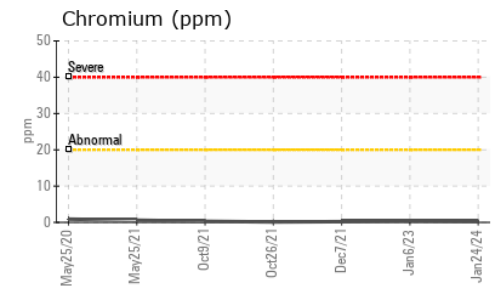
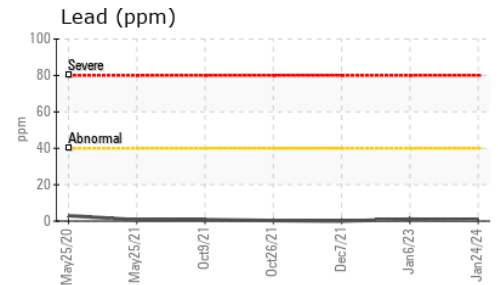
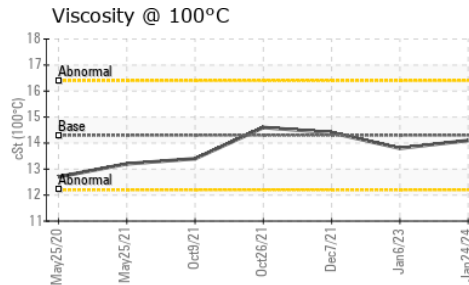
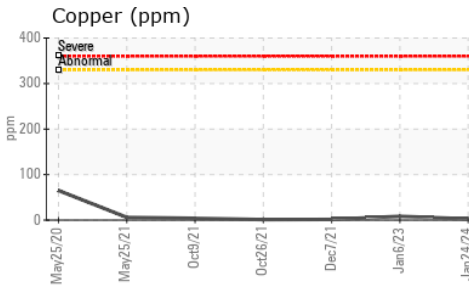
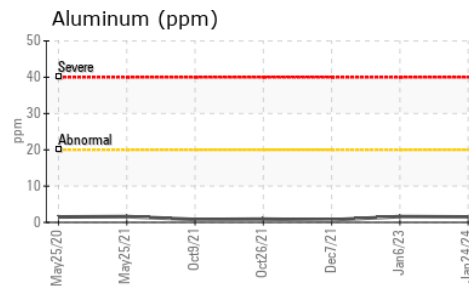
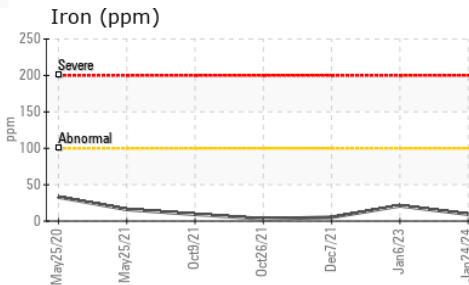


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	18.4	19.6	17.3

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	87.3	85.9	88.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	14.1	13.8	14.4
Viscosity Index (VI)	Scale	ASTM D2270*	169	166	164	168

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations
Sample No. : PC0078373 **Received** : 01 Feb 2024 151 Ram Forest Rd,
Lab Number : **02612722** **Diagnosed** : 01 Feb 2024 Stouffville, ON
Unique Number : 5721817 **Diagnostician** : Bill Quesnel CA L4A 2G8
Test Package : MOB 1 (Additional Tests: KV40, VI) Contact: Shannon Abbott
sabbott@gipi.com

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.