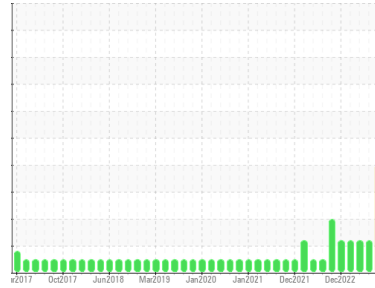




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
1510

Component
Rear Diesel Engine

Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for faulty combustion and a possible overheat condition. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Water treatment chemicals present, indicating slow coolant leak. There is a moderate concentration of dirt present in the oil. Test for glycol is negative.

Fluid Condition

A small degree of oil oxidation was indicated. The oil is no longer serviceable. The condition of the oil is acceptable for the time in service (see recommendation).

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0873846	WC0841025	WC0812476
Sample Date	Client Info	22 Nov 2023	19 Jul 2023	18 May 2023
Machine Age	hrs	27033	26474	25912
Oil Age	hrs	559	482	572
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	ATTENTION	ATTENTION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	25	18	18
Chromium	ppm ASTM D5185(m) >20	1	1	1
Nickel	ppm ASTM D5185(m) >4	<1	<1	0
Titanium	ppm ASTM D5185(m)	0	0	<1
Silver	ppm ASTM D5185(m) >3	<1	0	0
Aluminum	ppm ASTM D5185(m) >20	4	2	2
Lead	ppm ASTM D5185(m) >40	2	1	2
Copper	ppm ASTM D5185(m) >330	4	3	3
Tin	ppm ASTM D5185(m) >15	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	0
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) 0	19	11	11
Barium	ppm ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm ASTM D5185(m) 60	102	86	77
Manganese	ppm ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	878	934	934
Calcium	ppm ASTM D5185(m) 1070	1001	1007	1061
Phosphorus	ppm ASTM D5185(m) 1150	758	887	969
Zinc	ppm ASTM D5185(m) 1270	1097	1110	1111
Sulfur	ppm ASTM D5185(m) 2060	2523	2549	2525
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

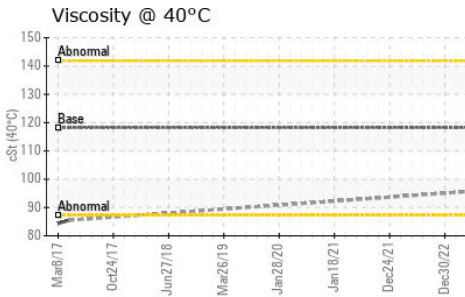
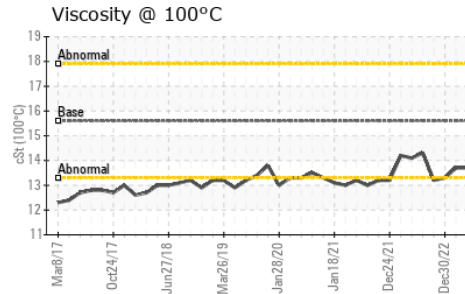
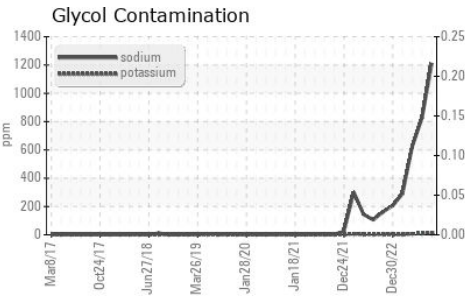
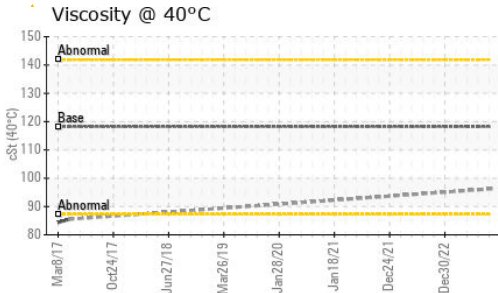
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	▲ 29	11	8
Sodium	ppm ASTM D5185(m)	▲ 1212	▲ 826	▲ 626
Potassium	ppm ASTM D5185(m) >20	15	10	7
Glycol	% ASTM D7922*	0.0	0.0	0.0

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.4	0.5	0.5
Nitration	Abs/cm ASTM D7624* >20	13.8	12.5	11.6
Sulfation	Abs./1mm ASTM D7415* >30	29.3	28.4	26.2



OIL ANALYSIS REPORT

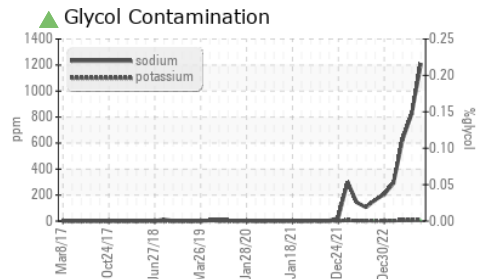
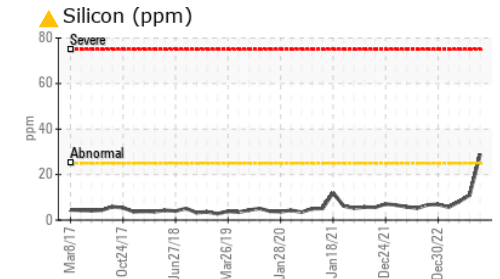
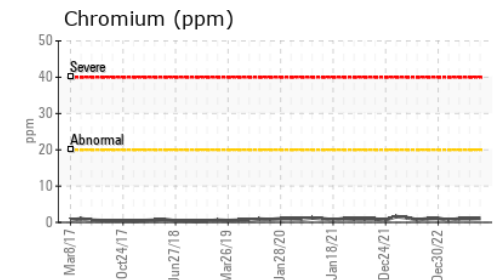
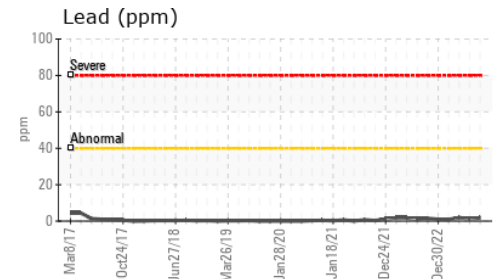
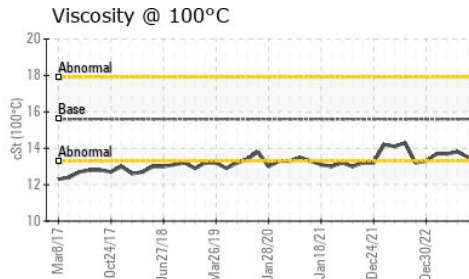
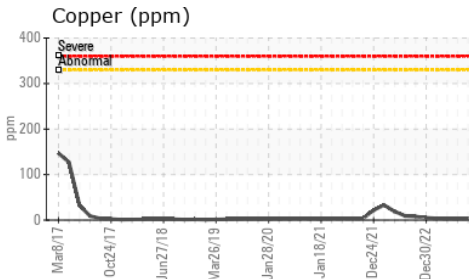
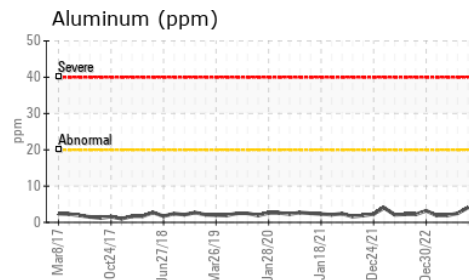
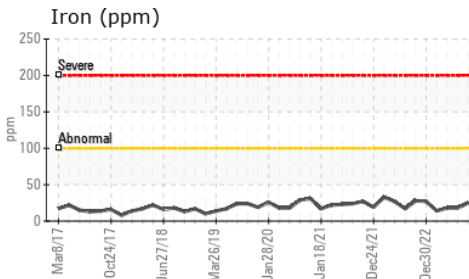


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	▲ 32.7	29.6	26.7

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)	118.2	96.2	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	13.5	13.8	13.7
Viscosity Index (VI)	Scale	ASTM D2270*	139	140	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0873846 **Received** : 06 Dec 2023
Lab Number : 02601147 **Diagnosed** : 07 Dec 2023
Unique Number : 5694232 **Diagnostician** : Bill Quesnel
Test Package : MOB 1 (Additional Tests: Glycol, KV40, VI)

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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.