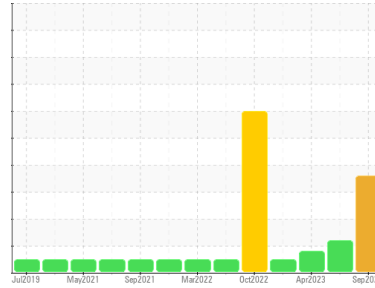




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
401024

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. 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

Test for glycol is positive. There is a light concentration of glycol present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0091615	GFL0077641	GFL0077558
Sample Date	Client Info	13 Sep 2023	15 Jun 2023	04 Apr 2023
Machine Age	kms Client Info	0	514676	17924
Oil Age	kms Client Info	0	0	570
Oil Changed	Client Info	Changed	N/A	Changed
Sample Status		ATTENTION	ATTENTION	MARGINAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	▲ 4.6

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >110	36	27	23
Chromium	ppm ASTM D5185(m) >4	2	2	2
Nickel	ppm ASTM D5185(m) >2	<1	<1	0
Titanium	ppm ASTM D5185(m)	<1	0	<1
Silver	ppm ASTM D5185(m) >2	0	0	0
Aluminum	ppm ASTM D5185(m) >25	4	2	2
Lead	ppm ASTM D5185(m) >45	2	<1	<1
Copper	ppm ASTM D5185(m) >85	1	<1	<1
Tin	ppm ASTM D5185(m) >4	0	0	<1
Antimony	ppm ASTM D5185(m)	0	0	<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) 0	1	1	<1
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	61	62	61
Manganese	ppm ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	870	914	895
Calcium	ppm ASTM D5185(m) 1070	940	1018	1095
Phosphorus	ppm ASTM D5185(m) 1150	934	987	1036
Zinc	ppm ASTM D5185(m) 1270	1057	1139	1130
Sulfur	ppm ASTM D5185(m) 2060	2257	2289	2476
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >30	7	5	5
Sodium	ppm ASTM D5185(m)	▲ 215	▲ 191	157
Potassium	ppm ASTM D5185(m) >20	4	1	<1
Glycol	% ASTM D7922*	▲ 0.013	0.0	0.0

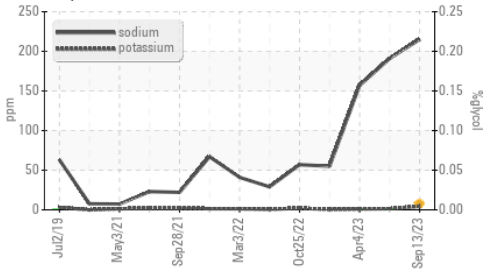
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.7	0.5	0.5
Nitration	Abs/cm ASTM D7624* >20	12.0	9.9	9.8
Sulfation	Abs/.1mm ASTM D7415* >30	24.4	21.9	24.1



OIL ANALYSIS REPORT

▲ Glycol Contamination



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	24.8	19.6	17.6
Base Number (BN)	mg KOH/g ASTM D2896*	9.8	7.37	7.86	8.04

VISUAL

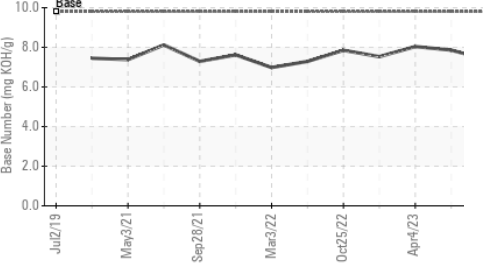
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

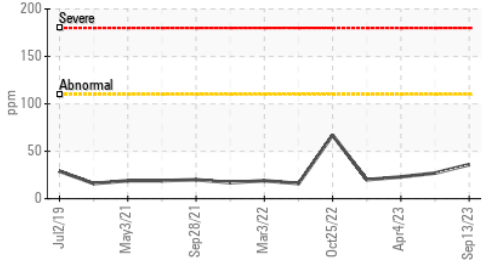
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.4	13.1	13.6	12.8

GRAPHS

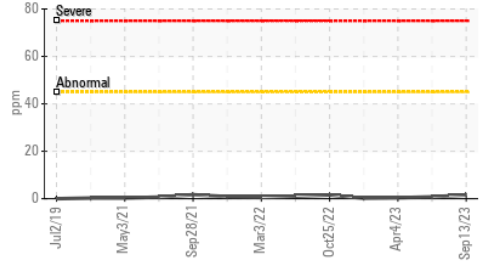
Base Number



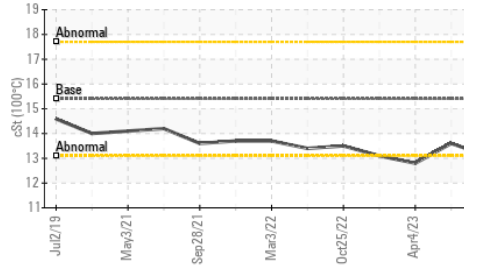
Iron (ppm)



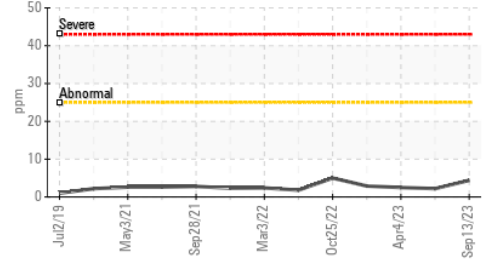
Lead (ppm)



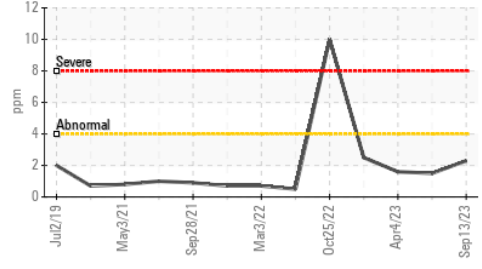
Viscosity @ 100°C



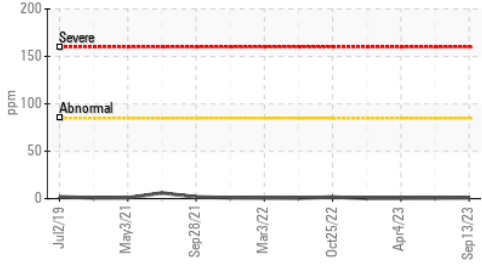
Aluminum (ppm)



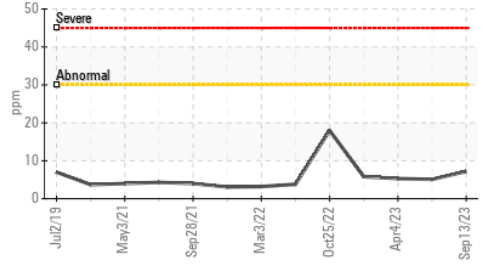
Chromium (ppm)



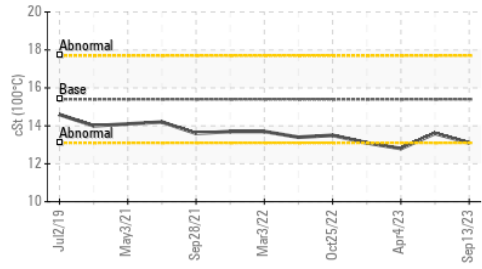
Copper (ppm)



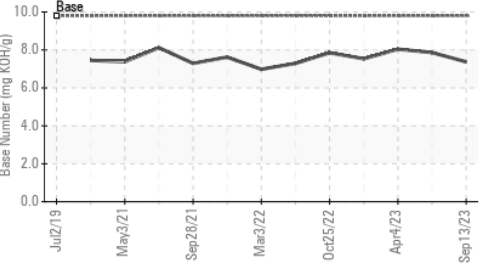
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091615 **Received** : 19 Sep 2023
Lab Number : 02583466 **Diagnosed** : 20 Sep 2023
Unique Number : 5644531 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: Glycol)

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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