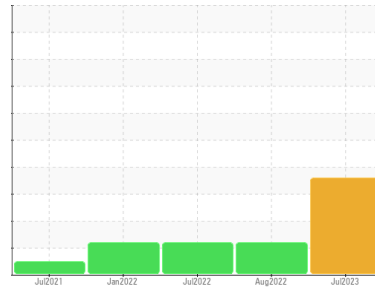




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
801162

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Check for low coolant level. 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

Light fuel dilution occurring. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. 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	GFL0084058	GFL0039243	GFL0039346
Sample Date	Client Info	05 Jul 2023	24 Aug 2022	04 Jul 2022
Machine Age	hrs	20996	19419	19146
Oil Age	hrs	600	6000	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >110	27	9	25
Chromium	ppm	ASTM D5185(m) >4	1	<1	2
Nickel	ppm	ASTM D5185(m) >2	0	0	0
Titanium	ppm	ASTM D5185(m)	<1	<1	<1
Silver	ppm	ASTM D5185(m) >2	0	0	<1
Aluminum	ppm	ASTM D5185(m) >25	6	<1	2
Lead	ppm	ASTM D5185(m) >45	1	<1	1
Copper	ppm	ASTM D5185(m) >85	2	<1	2
Tin	ppm	ASTM D5185(m)	<1	0	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) 0	4	2	3
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	89	57	64
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	927	910	950
Calcium	ppm	ASTM D5185(m) 1070	1025	1032	1083
Phosphorus	ppm	ASTM D5185(m) 1150	1060	1038	1016
Zinc	ppm	ASTM D5185(m) 1270	1171	1118	1197
Sulfur	ppm	ASTM D5185(m) 2060	2555	2555	2668
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >30	28	4	14
Sodium	ppm	ASTM D5185(m)	▲ 378	16	50
Potassium	ppm	ASTM D5185(m) >20	▲ 420	25	86
Fuel	%	ASTM D7593* >5	▲ 3.5	▲ 3.4	▲ 4
Glycol	%	ASTM D7922*	0.0	0.0	0.0

INFRA-RED

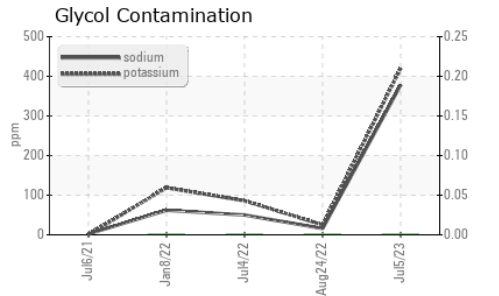
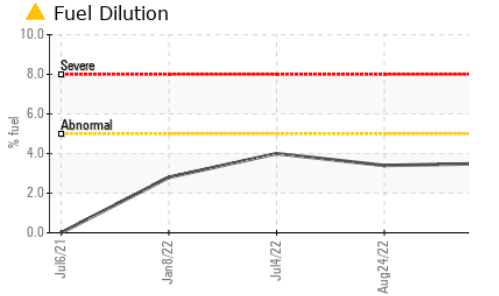
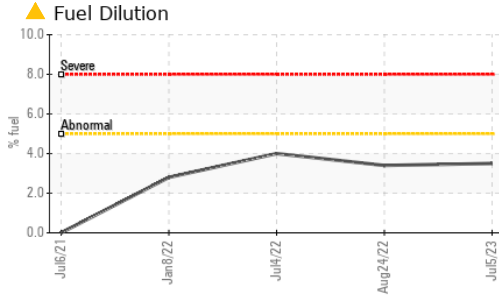
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >3	0.1	0	0.1
Nitration	Abs/cm	ASTM D7624* >20	8.9	6.6	8.4
Sulfation	Abs/.1mm	ASTM D7415* >30	22.4	20.6	20.7

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	17.4	16.3	17.5



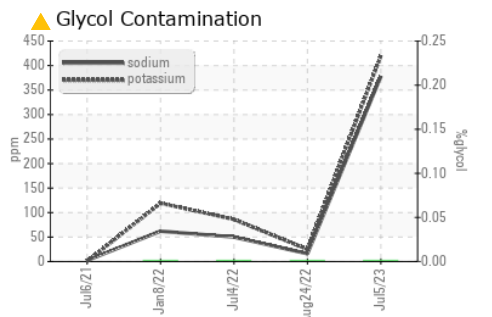
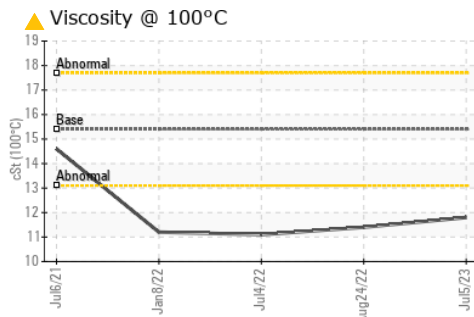
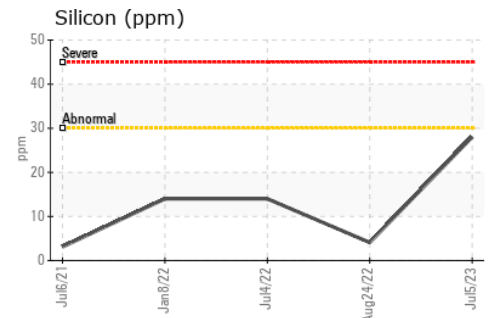
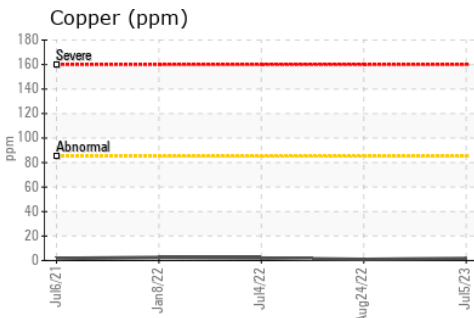
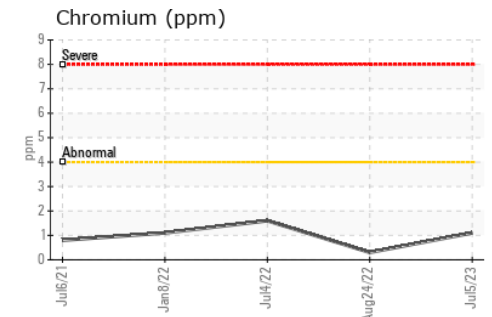
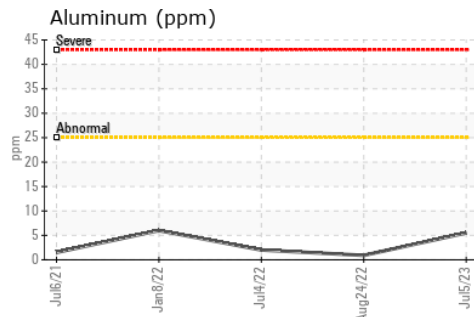
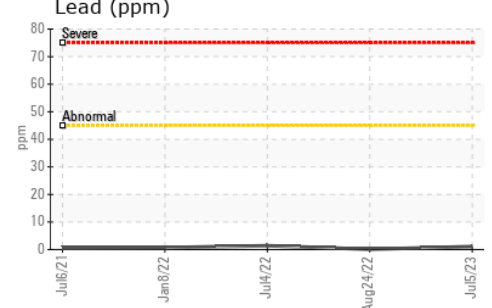
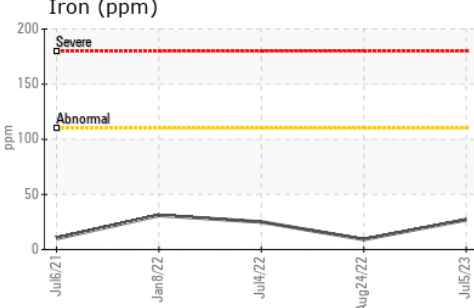
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.8	▲ 11.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet
Sample No. : GFL0084058 **Received** : 28 Jul 2023
Lab Number : 02572875 **Diagnosed** : 31 Jul 2023
Unique Number : 5617926 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel)

70 Golden Drive,
 Coquitlam, BC
 CA V3K 6B5
 Contact: Allison Adams
 aadams@gflenv.com
 T: (604)529-4023
 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.