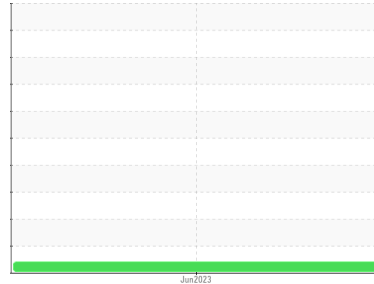




OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id
911049

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number	Client Info		GFL0084232	---	---
Sample Date	Client Info		07 Jun 2023	---	---
Machine Age	kms	Client Info	11222	---	---
Oil Age	kms	Client Info	0	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history 1	history 2
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m) >120	66	---	---
Chromium	ppm	ASTM D5185(m) >20	2	---	---
Nickel	ppm	ASTM D5185(m) >5	13	---	---
Titanium	ppm	ASTM D5185(m) >2	<1	---	---
Silver	ppm	ASTM D5185(m) >2	1	---	---
Aluminum	ppm	ASTM D5185(m) >20	4	---	---
Lead	ppm	ASTM D5185(m) >40	8	---	---
Copper	ppm	ASTM D5185(m) >330	259	---	---
Tin	ppm	ASTM D5185(m) >15	3	---	---
Antimony	ppm	ASTM D5185(m)	<1	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m) 250	2	---	---
Barium	ppm	ASTM D5185(m) 10	<1	---	---
Molybdenum	ppm	ASTM D5185(m) 100	4	---	---
Manganese	ppm	ASTM D5185(m)	6	---	---
Magnesium	ppm	ASTM D5185(m) 450	65	---	---
Calcium	ppm	ASTM D5185(m) 3000	2041	---	---
Phosphorus	ppm	ASTM D5185(m) 1150	891	---	---
Zinc	ppm	ASTM D5185(m) 1350	1067	---	---
Sulfur	ppm	ASTM D5185(m) 4250	2367	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m) >25	45	---	---
Sodium	ppm	ASTM D5185(m) >158	6	---	---
Potassium	ppm	ASTM D5185(m) >20	12	---	---
Fuel	%	ASTM D7593* >3.0	0.7	---	---

INFRA-RED

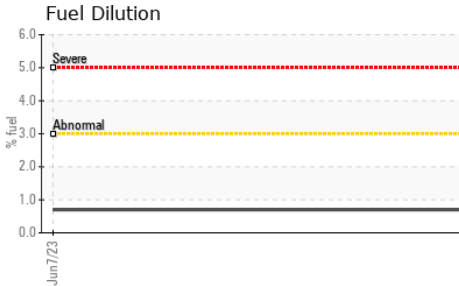
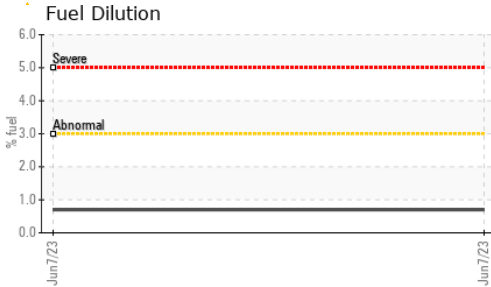
	method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844* >4	0.3	---	---
Nitration	Abs/cm	ASTM D7624* >20	7.1	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	21.0	---	---

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414* >25	13.4	---	---



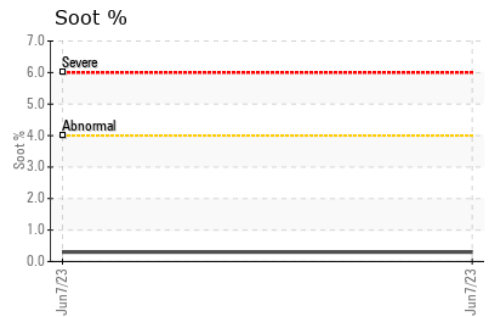
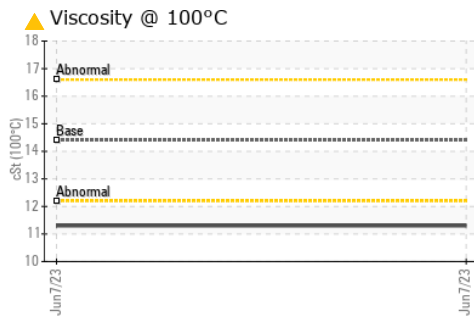
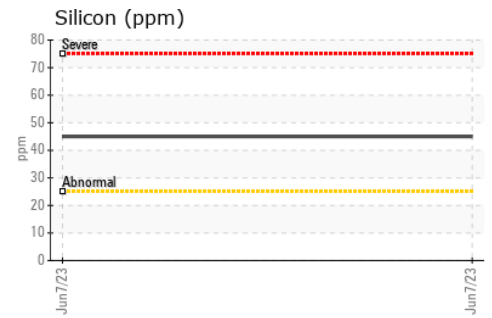
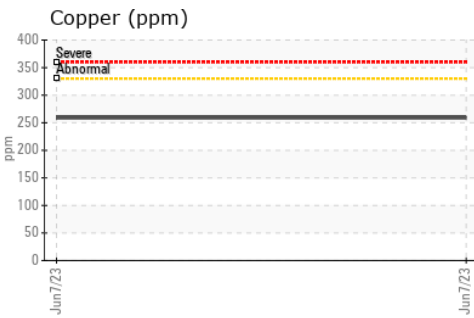
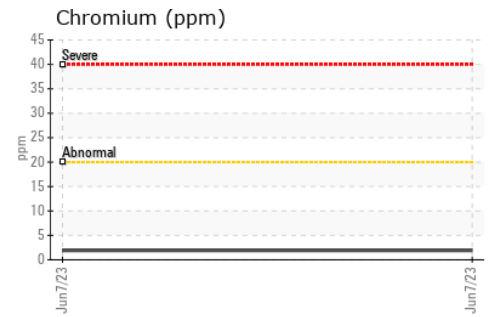
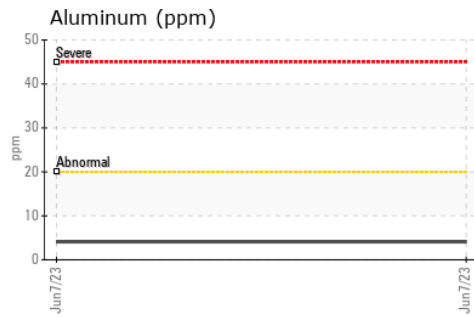
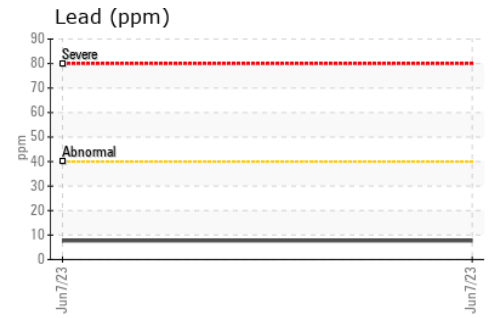
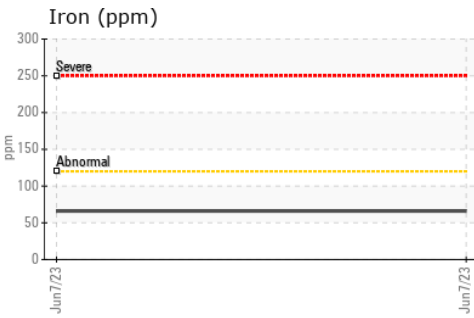
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 11.3	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 252 - GTA Hauling
Sample No. : GFL0084232 **Received** : 29 Jun 2023 3668 Weston Road
Lab Number : 02567200 **Diagnosed** : 30 Jun 2023 North York, ON
Unique Number : 5604246 **Diagnostician** : Kevin Marson CA M9L 1W2
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)
 Contact: Tom Hatzioannidis
 thatzioannidis@gflenv.com
 T: (416)406-2040
 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.