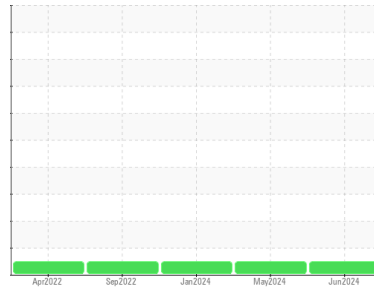




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

930020

Component

Diesel Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0117262	GFL0117351	GFL0084300
Sample Date	Client Info		11 Jun 2024	07 May 2024	04 Jan 2024
Machine Age	hrs	Client Info	6765	6473	5499
Oil Age	hrs	Client Info	299	967	1010
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	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
PQ	ASTM D8184*		0	---	---
Iron	ppm	ASTM D5185(m) >100	31	58	17
Chromium	ppm	ASTM D5185(m) >20	2	3	1
Nickel	ppm	ASTM D5185(m) >4	1	2	<1
Titanium	ppm	ASTM D5185(m)	<1	<1	0
Silver	ppm	ASTM D5185(m) >3	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	3	6	2
Lead	ppm	ASTM D5185(m) >40	0	<1	<1
Copper	ppm	ASTM D5185(m) >330	<1	1	1
Tin	ppm	ASTM D5185(m) >15	0	0	<1
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) 50	14	8	12
Barium	ppm	ASTM D5185(m) 5	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 50	50	61	55
Manganese	ppm	ASTM D5185(m) 0	<1	2	<1
Magnesium	ppm	ASTM D5185(m) 560	521	551	571
Calcium	ppm	ASTM D5185(m) 1510	1522	1657	1672
Phosphorus	ppm	ASTM D5185(m) 780	706	706	715
Zinc	ppm	ASTM D5185(m) 870	860	904	921
Sulfur	ppm	ASTM D5185(m) 2040	1932	1936	2055
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

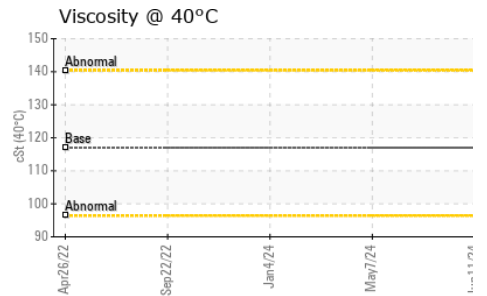
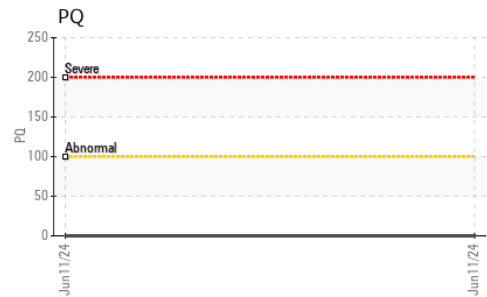
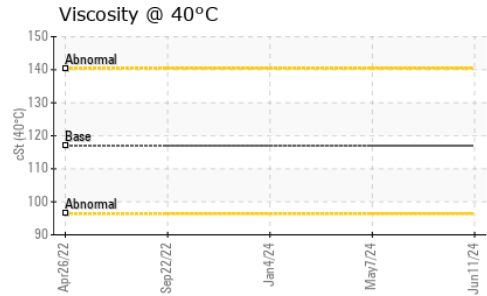
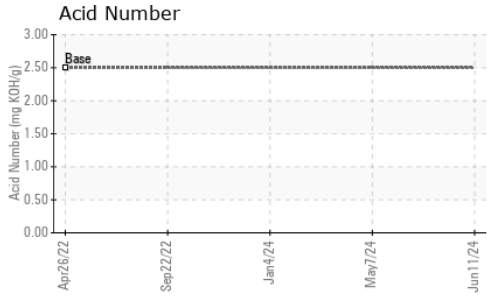
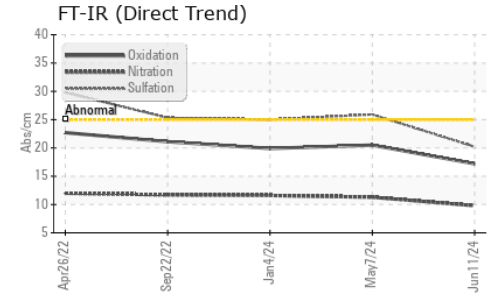
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	15	18	5
Sodium	ppm	ASTM D5185(m)	7	12	7
Potassium	ppm	ASTM D5185(m) >20	<1	2	<1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0	0	0
Nitration	Abs/cm	ASTM D7624* >20	9.8	11.3	11.6
Sulfation	Abs.1mm	ASTM D7415* >30	20.2	25.9	25.0



OIL ANALYSIS REPORT

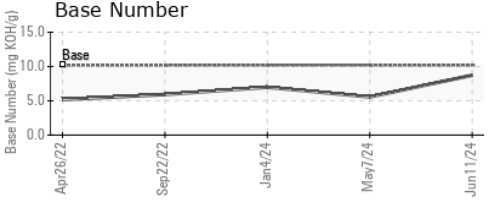
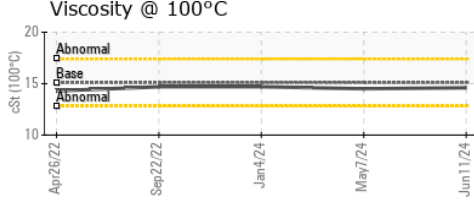
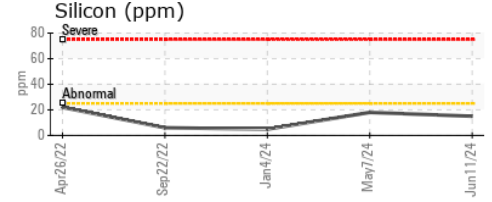
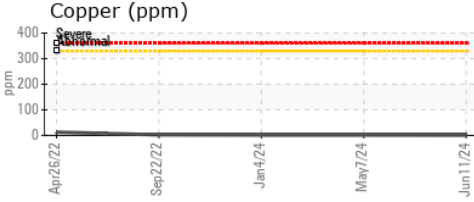
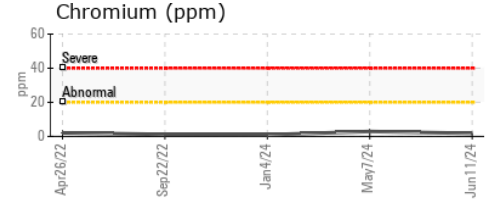
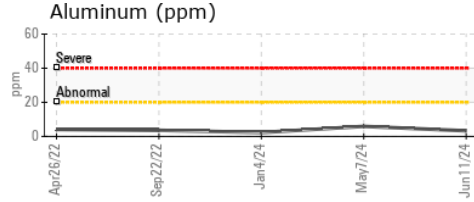
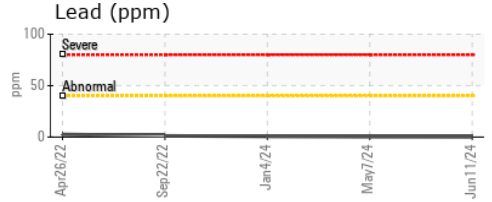
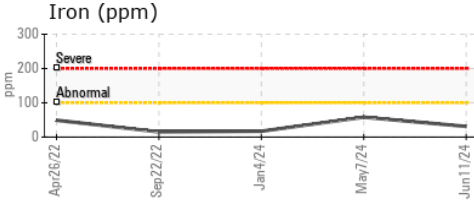


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	17.2	20.5	19.9
Acid Number (AN)	mg KOH/g	ASTM D974*	2.5	2.22	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	8.73	5.56	6.98

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
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)	117.0	114	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	14.6	14.5	14.7
Viscosity Index (VI)	Scale	ASTM D2270*	134	130	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 550 - Rocky View County**
Sample No. : GFL0117262 **Received** : 17 Jun 2024 220 Carmek Blvd
Lab Number : **02642366** **Tested** : 20 Jun 2024 Rocky View County, AB
Unique Number : 5799905 **Diagnosed** : 20 Jun 2024 - Wes Davis CA T1X 1X1
Test Package : MOB 2 (Additional Tests: KV40, PQ, TAN Auto, TAN Man, VI, Visual) Contact: GFL Calgary
 calgarymaintenance@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-268-2131. T:
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (403)369-6163
 Validity of results and interpretation are based on the sample and information as supplied.