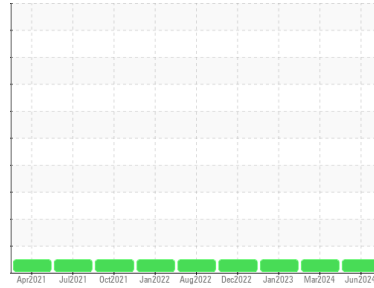




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

710029

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (--- LTR)

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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0080161	GFL0080089	GFL0044754
Sample Date	Client Info		14 Jun 2024	21 Mar 2024	12 Jan 2023
Machine Age	hrs	Client Info	7953	7352	4636
Oil Age	hrs	Client Info	601	600	600
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	
Iron	ppm	ASTM D5185(m)	>80	22	22	5
Chromium	ppm	ASTM D5185(m)	>5	1	<1	0
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>30	3	2	2
Lead	ppm	ASTM D5185(m)	>30	0	0	0
Copper	ppm	ASTM D5185(m)	>150	1	<1	<1
Tin	ppm	ASTM D5185(m)	>5	<1	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	3	1	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	57	57
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	909	920	931
Calcium	ppm	ASTM D5185(m)	1070	1013	980	1049
Phosphorus	ppm	ASTM D5185(m)	1150	915	920	1058
Zinc	ppm	ASTM D5185(m)	1270	1156	1128	1148
Sulfur	ppm	ASTM D5185(m)	2060	2346	2307	2626
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	7	6	4
Sodium	ppm	ASTM D5185(m)		8	6	2
Potassium	ppm	ASTM D5185(m)	>20	3	3	0

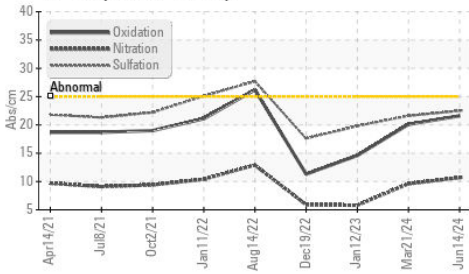
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.6	0.4	0
Nitration	Abs/cm	ASTM D7624*	>20	10.7	9.6	5.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.5	21.6	19.8

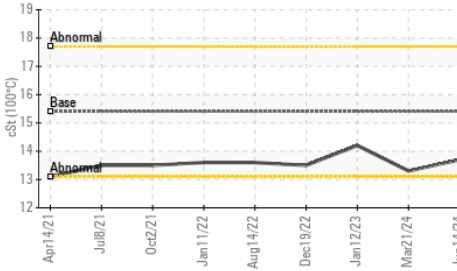


OIL ANALYSIS REPORT

FT-IR (Direct Trend)



Viscosity @ 100°C



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	21.6	20.1	14.6

VISUAL

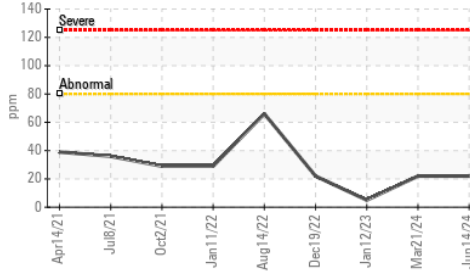
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

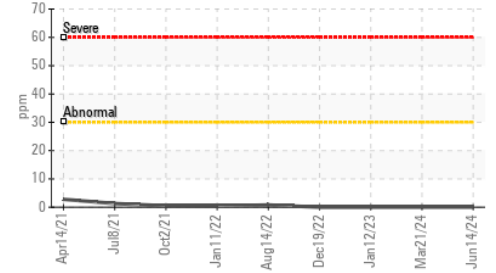
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.4	13.7	13.3	14.2

GRAPHS

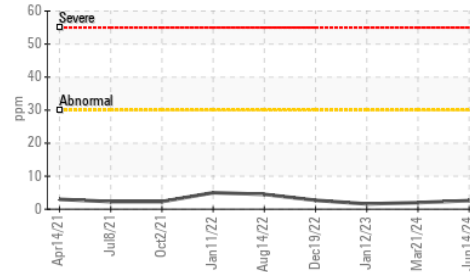
Iron (ppm)



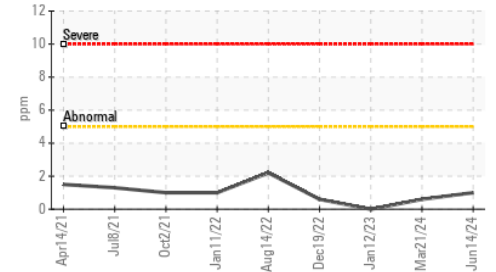
Lead (ppm)



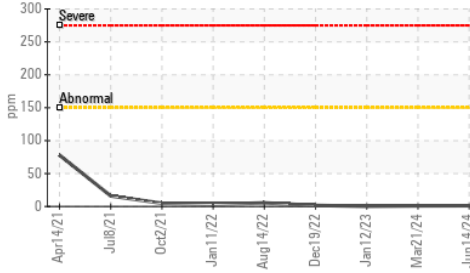
Aluminum (ppm)



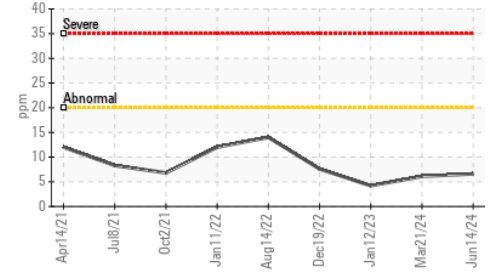
Chromium (ppm)



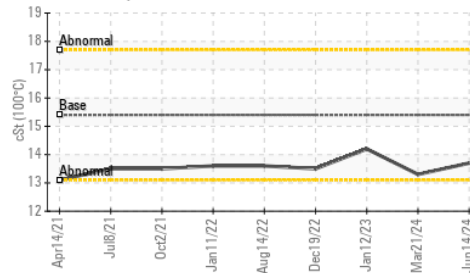
Copper (ppm)



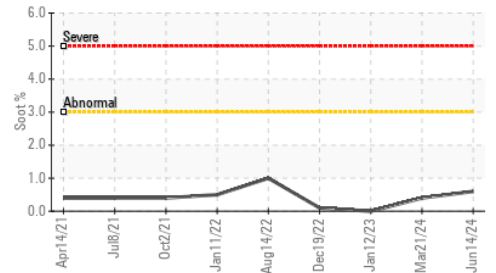
Silicon (ppm)



Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0080161
Lab Number : 02647558
Unique Number : 5813110
Test Package : MOB 1

GFL Environmental - 577 - First Class
 8540 Chilliwack Mountain Rd,
 Chilliwack, BC
 CA V2R 3W8
 Contact: Derek Jessop
 djessop@gflenv.com
 T: (604)798-5301
 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.