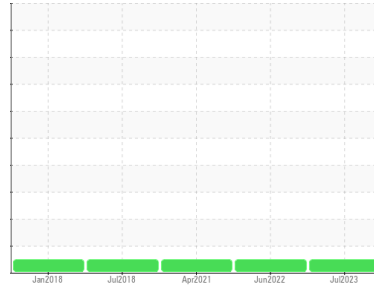




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id

7979

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (--- 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	GFL0085960	GFL0054209	GFL0023303	
Sample Date	Client Info	19 Jul 2023	17 Jun 2022	13 Apr 2021	
Machine Age	hrs	Client Info	16980	15957	15116
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info	N/A	Changed	Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	36	15	8
Chromium	ppm ASTM D5185(m) >20	2	<1	<1
Nickel	ppm ASTM D5185(m) >4	0	0	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m) >3	0	<1	0
Aluminum	ppm ASTM D5185(m) >20	2	<1	1
Lead	ppm ASTM D5185(m) >40	2	<1	<1
Copper	ppm ASTM D5185(m) >330	1	<1	<1
Tin	ppm ASTM D5185(m) >15	<1	<1	<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) 2	6	6	4
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 50	64	61	58
Manganese	ppm ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 950	1041	991	979
Calcium	ppm ASTM D5185(m) 1050	1106	1092	1059
Phosphorus	ppm ASTM D5185(m) 995	1125	1067	1021
Zinc	ppm ASTM D5185(m) 1180	1265	1235	1250
Sulfur	ppm ASTM D5185(m) 2600	2540	2655	2732
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	6	7	4
Sodium	ppm ASTM D5185(m)	9	6	2
Potassium	ppm ASTM D5185(m) >20	2	2	<1

INFRA-RED

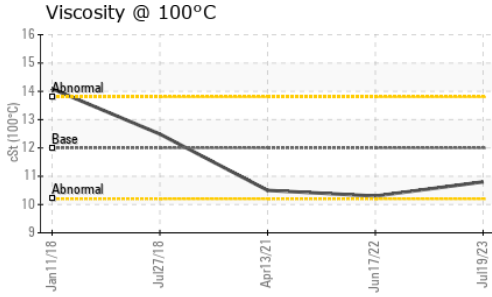
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.4	0	0
Nitration	Abs/cm ASTM D7624* >20	10.3	8.5	6.6
Sulfation	Abs/.1mm ASTM D7415* >30	23.0	22.2	19.4

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	21.9	17.5	15.2



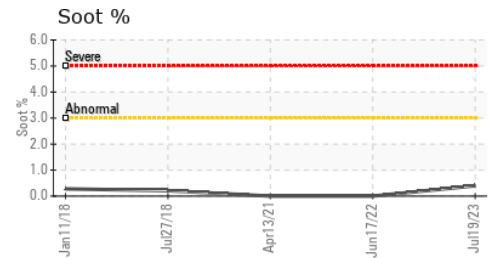
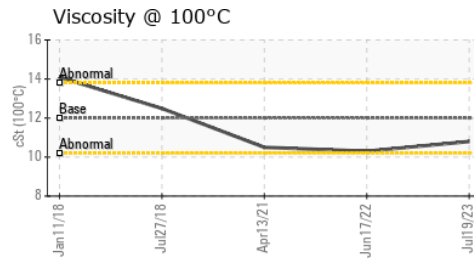
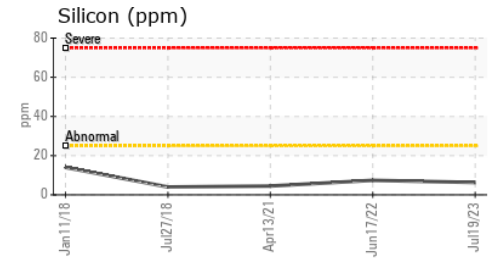
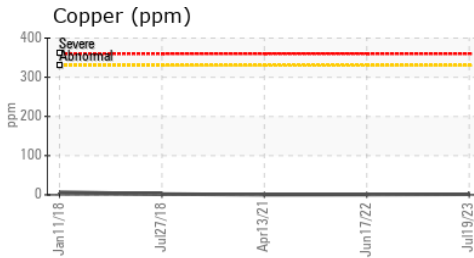
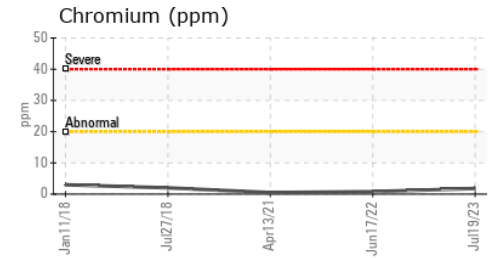
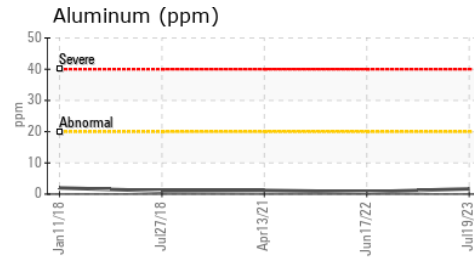
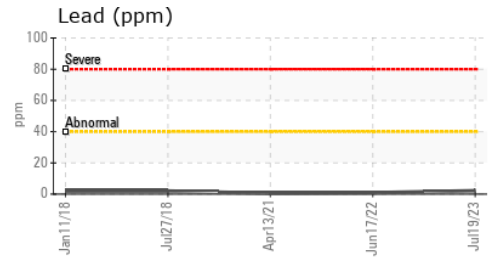
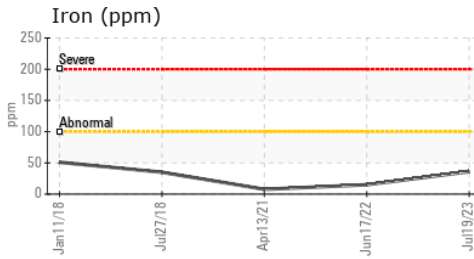
OIL ANALYSIS REPORT



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	---
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)	12.00	10.8	10.3	10.5

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW
Sample No. : GFL0085960 **Received** : 28 Jul 2023
Lab Number : 02572888 **Diagnosed** : 28 Jul 2023
Unique Number : 5617939 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

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.

8409 -15th Street NW
 Edmonton, AB
 CA T6P 0B8
 Contact: Antonio De Rosa
 atheros@gflenv.com
 T: (780)509-2640
 F: (780)444-8851