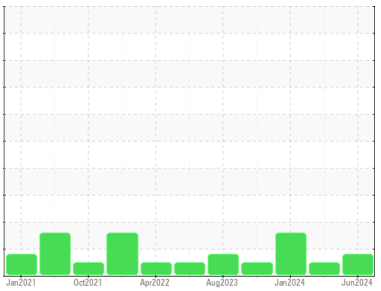
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
5595
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0119037**	GFL0112576	GFL0102638
Sample Date		Client Info		**24 Jun 2024**	05 Apr 2024	12 Jan 2024
Machine Age	hrs	Client Info		**405349**	7075	6994
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

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*	>65	**0**	---	---
Iron	ppm	ASTM D5185(m)	>80	▲ **90**	42	11
Chromium	ppm	ASTM D5185(m)	>5	**3**	2	<1
Nickel	ppm	ASTM D5185(m)	>2	**2**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>30	**1**	1	2
Lead	ppm	ASTM D5185(m)	>30	**2**	<1	<1
Copper	ppm	ASTM D5185(m)	>150	**6**	3	2
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

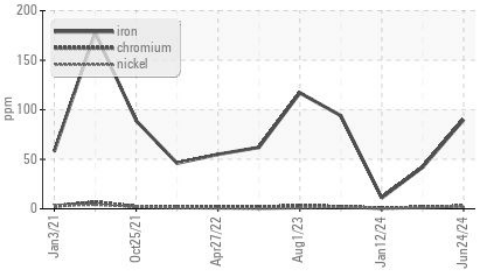
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	**3**	8	6
Barium	ppm	ASTM D5185(m)	0	**<1**	<1	9
Molybdenum	ppm	ASTM D5185(m)	50	**59**	57	57
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	0
Magnesium	ppm	ASTM D5185(m)	950	**966**	913	914
Calcium	ppm	ASTM D5185(m)	1050	**1077**	1053	1059
Phosphorus	ppm	ASTM D5185(m)	995	**1001**	931	972
Zinc	ppm	ASTM D5185(m)	1180	**1194**	1105	1115
Sulfur	ppm	ASTM D5185(m)	2600	**2406**	2425	2718
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**11**	18	▲ 25
Sodium	ppm	ASTM D5185(m)		**2**	2	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	2

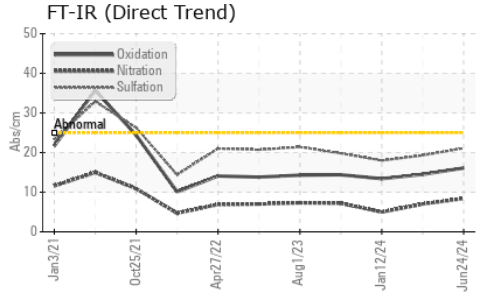
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**1**	0.5	0
Nitration	Abs/cm	ASTM D7624*	>20	**8.4**	7.0	5.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.1**	19.3	18.0

OIL ANALYSIS REPORT

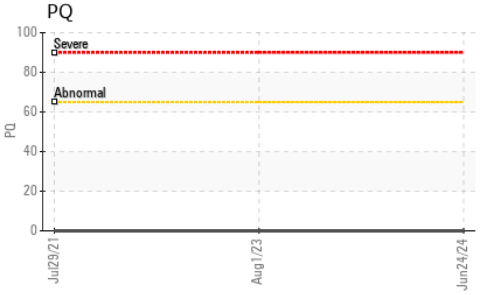
Ferrous Alloys



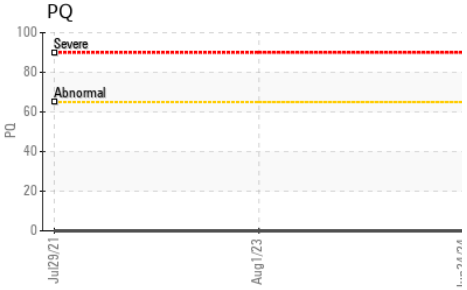
FT-IR (Direct Trend)



PQ



PQ



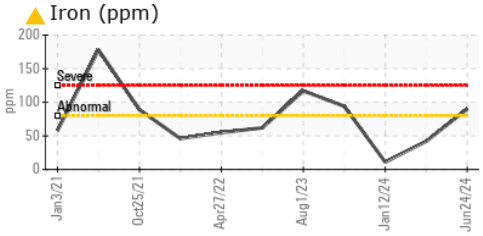
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.1**	14.5	13.4

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	---
Silt	scalar	Visual*	NONE	**NONE**	NONE	---
Debris	scalar	Visual*	NONE	**NONE**	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	---
Appearance	scalar	Visual*	NORML	**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

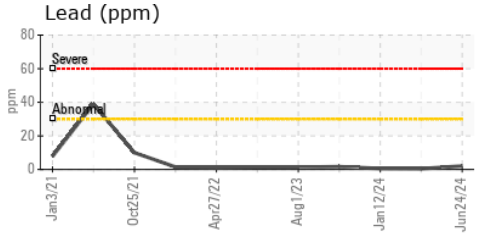
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**11.6**	11.0	11.5

GRAPHS

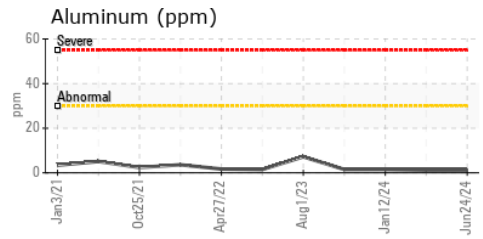
Iron (ppm)



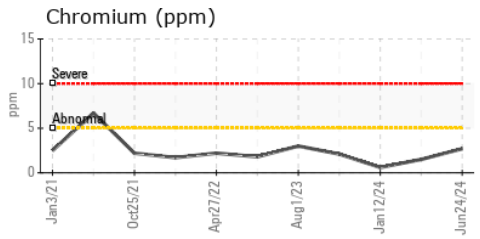
Lead (ppm)



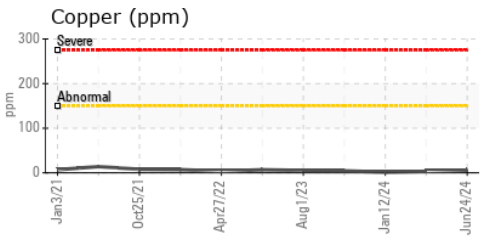
Aluminum (ppm)



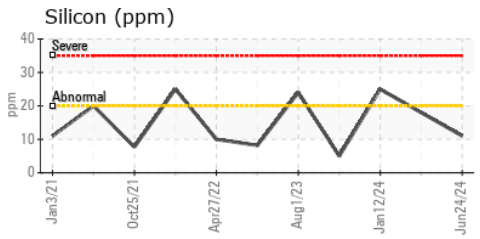
Chromium (ppm)



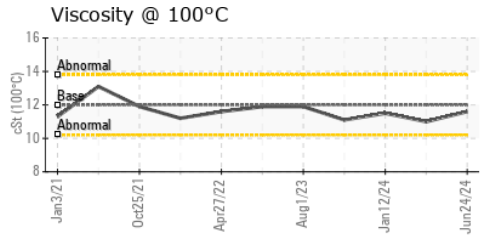
Copper (ppm)



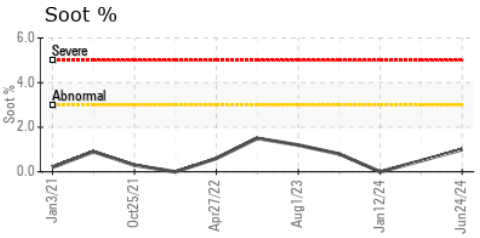
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0119037
Lab Number : 02646626
Unique Number : 5812178
Test Package : MOB 1 (Additional Tests: PQ, Visual)

Received : 09 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Kevin Marson

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.

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