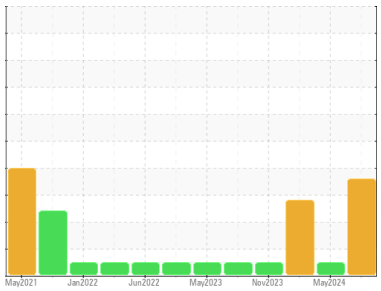
OIL ANALYSIS REPORT

Machine Id
5593
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (40 LTR)

Sample Rating Trend



FUEL

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. Check for low coolant level. 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
All component wear rates are normal.

Contamination
There is a high amount of fuel present in the oil. Water treatment chemicals present, indicating slow coolant leak. Tests confirm the presence of fuel in the oil. Test for glycol is negative.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants. The condition of the oil is acceptable for the time in service (see recommendation).

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL**	GFL0112522	GFL0102587
Sample Date		Client Info		**08 Jul 2024**	28 May 2024	05 Feb 2024
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	NORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**7**	17	16
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	0
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**3**	4	8
Lead	ppm	ASTM D5185(m)	>40	**2**	0	1
Copper	ppm	ASTM D5185(m)	>330	**1**	2	5
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)	2	**2**	2	2
Barium	ppm	ASTM D5185(m)	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	**62**	59	46
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	0
Magnesium	ppm	ASTM D5185(m)	950	**765**	968	690
Calcium	ppm	ASTM D5185(m)	1050	**836**	1042	794
Phosphorus	ppm	ASTM D5185(m)	995	**832**	993	723
Zinc	ppm	ASTM D5185(m)	1180	**944**	1158	840
Sulfur	ppm	ASTM D5185(m)	2600	**2108**	2400	2005
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	17	6
Sodium	ppm	ASTM D5185(m)		**346**	7	44
Potassium	ppm	ASTM D5185(m)	>20	**16**	4	6
Fuel	%	ASTM D7593*	>3.0	**7.6**	0.0	23.5
Glycol	%	ASTM D7922*		**0.0**	NEG	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.1**	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**8.6**	6.9	9.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.2**	19.4	19.0

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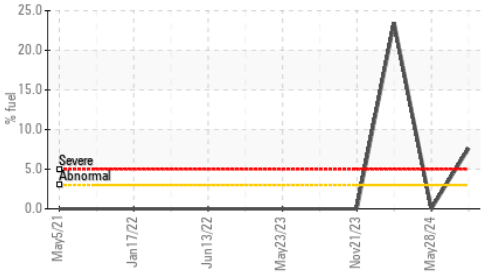
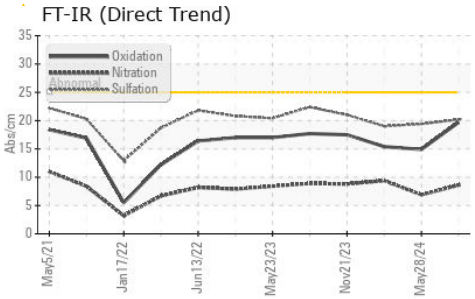
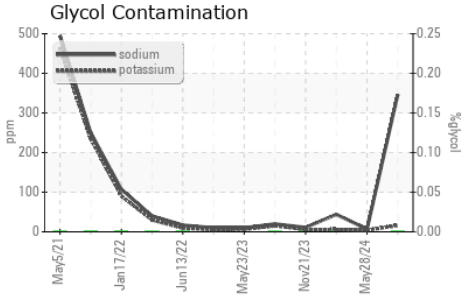
Fuel Dilution



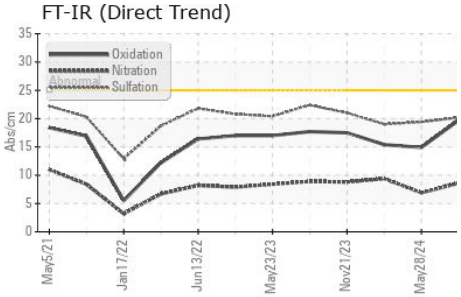
FT-IR (Direct Trend)



Glycol Contamination



FT-IR (Direct Trend)



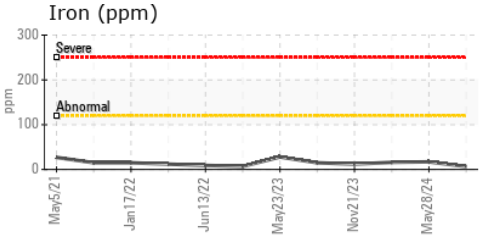
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**19.7**	14.9	15.4

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

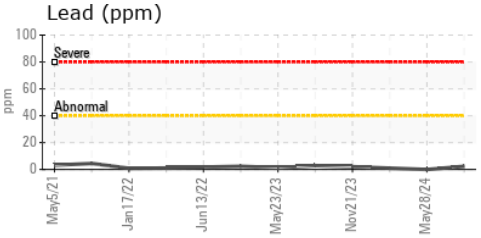
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	▲ **9.2**	11.5	▲ 7

GRAPHS

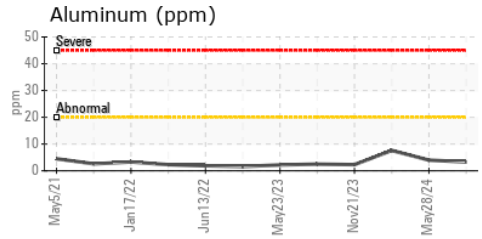
Iron (ppm)



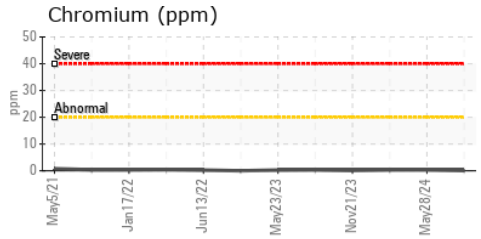
Lead (ppm)



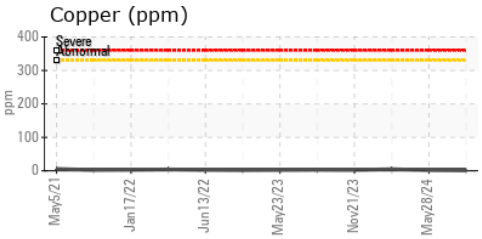
Aluminum (ppm)



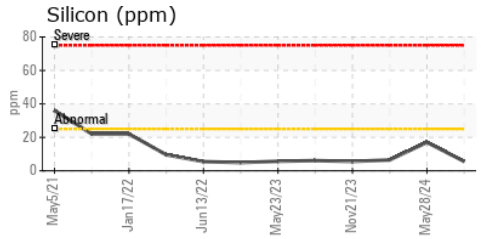
Chromium (ppm)



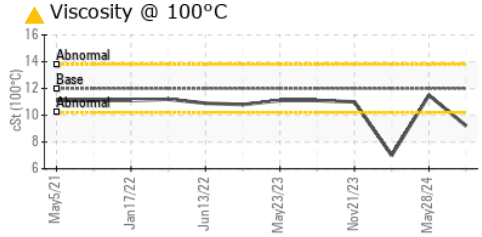
Copper (ppm)



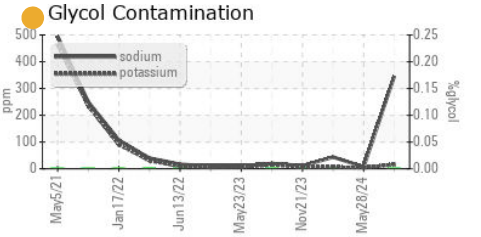
Silicon (ppm)



▲ Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL
Lab Number : 02646642
Unique Number : 5812194
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, Visual)

Received : 09 Jul 2024
Tested : 11 Jul 2024
Diagnosed : 11 Jul 2024 - Wes Davis

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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Submitted By: Brian Gagne