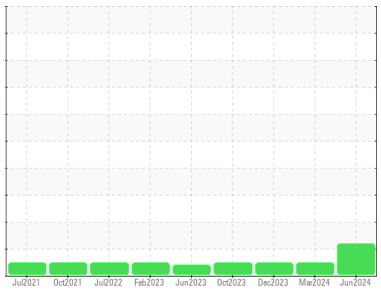
OIL ANALYSIS REPORT

Machine Id
5592
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

Sample Rating Trend



GLYCOL

DIAGNOSIS

Recommendation
Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil.

Fluid Condition
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		**GFL0118979**	GFL0102616	GFL0101695
Sample Date		Client Info		**03 Jun 2024**	06 Mar 2024	19 Dec 2023
Machine Age	hrs	Client Info		**1186586**	27612	27049
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**ATTENTION**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**10**	11	8
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**	0	0
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**2**	3	3
Lead	ppm	ASTM D5185(m)	>40	**1**	0	<1
Copper	ppm	ASTM D5185(m)	>330	**2**	4	2
Tin	ppm	ASTM D5185(m)	>15	**0**	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

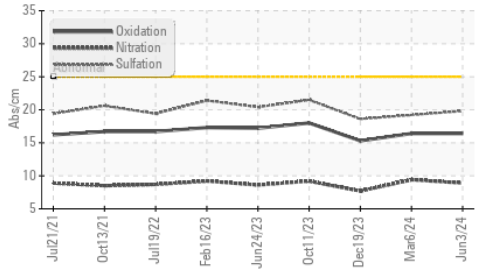
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	**2**	0	2
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	50	**67**	61	58
Manganese	ppm	ASTM D5185(m)	0	**<1**	0	0
Magnesium	ppm	ASTM D5185(m)	950	**920**	983	949
Calcium	ppm	ASTM D5185(m)	1050	**1035**	1047	1041
Phosphorus	ppm	ASTM D5185(m)	995	**990**	988	983
Zinc	ppm	ASTM D5185(m)	1180	**1158**	1178	1146
Sulfur	ppm	ASTM D5185(m)	2600	**2436**	2440	2593
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**8**	6	8
Sodium	ppm	ASTM D5185(m)		**192**	58	9
Potassium	ppm	ASTM D5185(m)	>20	**4**	2	3
Glycol	%	ASTM D7922*		**0.0**	NEG	NEG

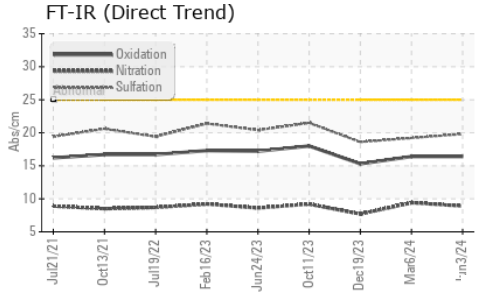
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.1**	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**8.9**	9.4	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.8**	19.2	18.6

OIL ANALYSIS REPORT

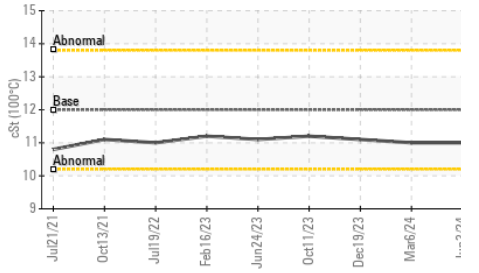
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Viscosity @ 100°C



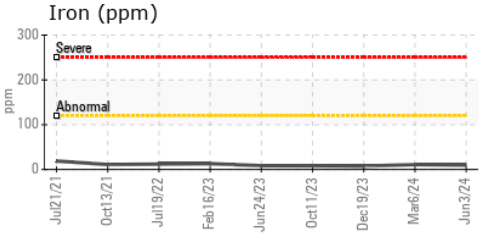
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.4**	16.4	15.3

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

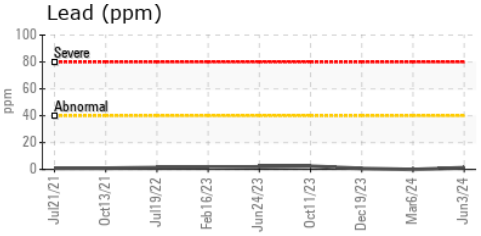
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**11.0**	11.0	11.1

GRAPHS

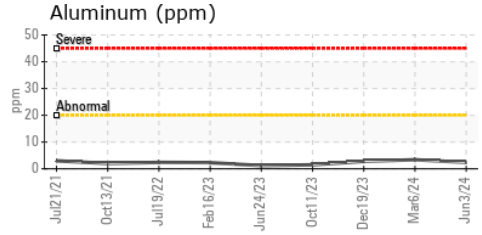
Iron (ppm)



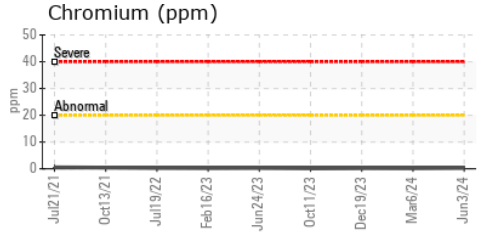
Lead (ppm)



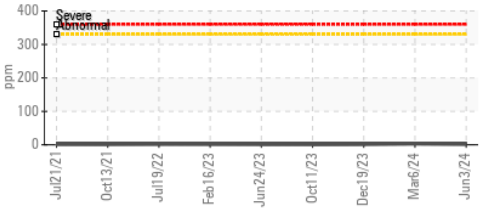
Aluminum (ppm)



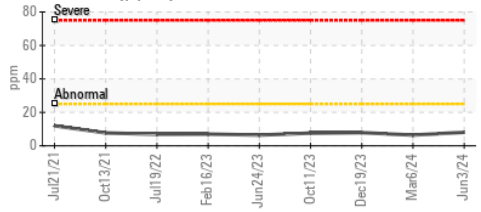
Chromium (ppm)



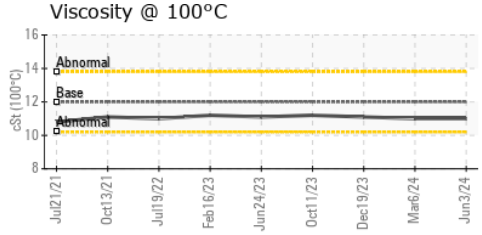
Copper (ppm)



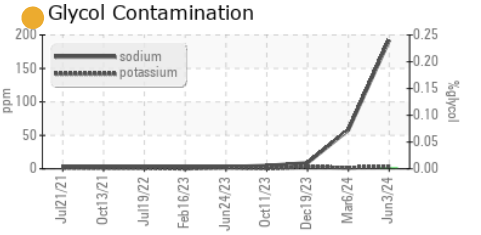
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0118979
Lab Number : 02642756
Unique Number : 5800295
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

Received : 19 Jun 2024
Tested : 19 Jun 2024
Diagnosed : 20 Jun 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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Report Id: GFL554 [WCAMIS] 02642756 (Generated: 06/20/2024 04:48:34) Rev: 1

Submitted By: Brian Gagne