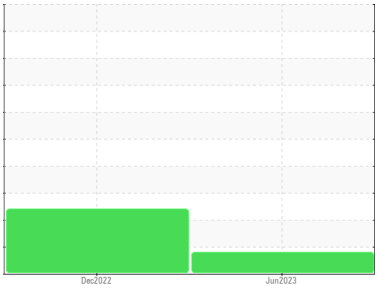
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
87276M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of fuel present in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**GFL0015803**	GFL0067579	---
Sample Date		Client Info		**28 Jun 2023**	29 Dec 2022	---
Machine Age	mls	Client Info		**274690**	0	---
Oil Age	mls	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	SEVERE	---

CONTAMINATION		method	limit/base	current	history 1	history 2
Glycol		WC Method		**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	**12**	28	---
Chromium	ppm	ASTM D5185m	>20	**2**	2	---
Nickel	ppm	ASTM D5185m	>2	**1**	<1	---
Titanium	ppm	ASTM D5185m	>2	**2**	0	---
Silver	ppm	ASTM D5185m	>2	**2**	0	---
Aluminum	ppm	ASTM D5185m	>25	**5**	11	---
Lead	ppm	ASTM D5185m	>40	**4**	<1	---
Copper	ppm	ASTM D5185m	>330	**2**	2	---
Tin	ppm	ASTM D5185m	>15	**2**	<1	---
Vanadium	ppm	ASTM D5185m		**1**	0	---
Cadmium	ppm	ASTM D5185m		**2**	0	---

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**1**	7	---
Barium	ppm	ASTM D5185m	0	**0**	0	---
Molybdenum	ppm	ASTM D5185m	60	**54**	56	---
Manganese	ppm	ASTM D5185m	0	**2**	<1	---
Magnesium	ppm	ASTM D5185m	1010	**949**	851	---
Calcium	ppm	ASTM D5185m	1070	**1063**	1035	---
Phosphorus	ppm	ASTM D5185m	1150	**987**	915	---
Zinc	ppm	ASTM D5185m	1270	**1222**	1153	---
Sulfur	ppm	ASTM D5185m	2060	**3644**	3255	---

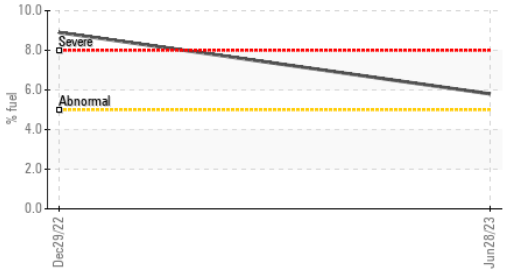
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**8**	10	---
Sodium	ppm	ASTM D5185m		**4**	3	---
Potassium	ppm	ASTM D5185m	>20	**5**	0	---
Fuel	%	ASTM D3524	>5	▲ **5.8**	⬢ 8.9	---

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**0.2**	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	**8.0**	12.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.5**	19.7	---

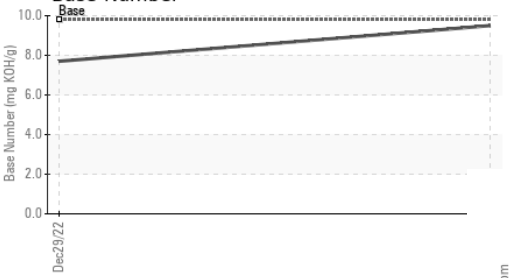
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.8**	20.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.5**	7.7	---

OIL ANALYSIS REPORT

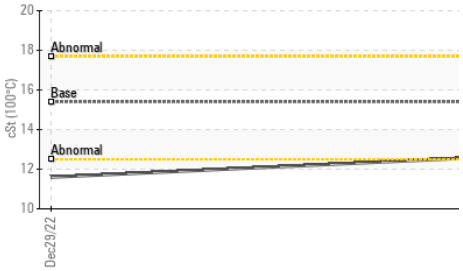
Fuel Dilution



Base Number



Viscosity @ 100°C

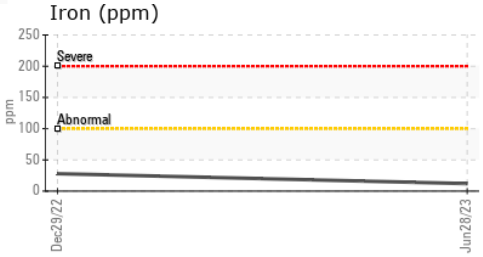


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	---
Free Water	scalar	*Visual		**NEG**	NEG	---

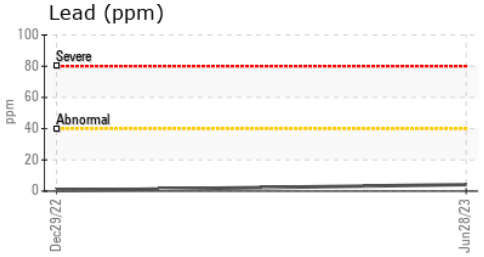
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	**12.6**	▲ 11.6	---

GRAPHS

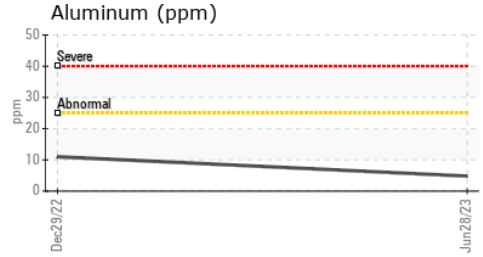
Iron (ppm)



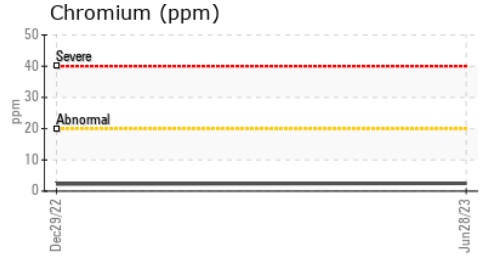
Lead (ppm)



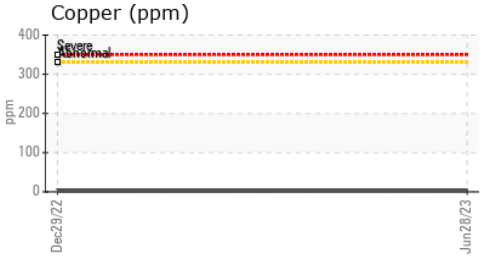
Aluminum (ppm)



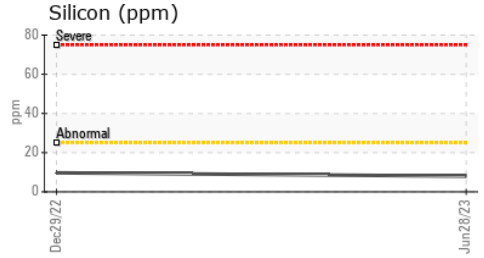
Chromium (ppm)



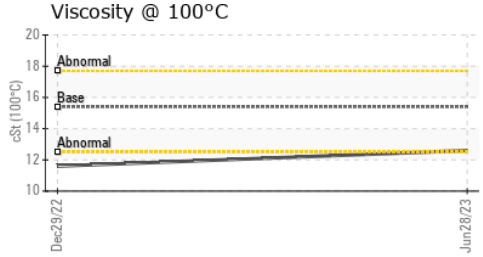
Copper (ppm)



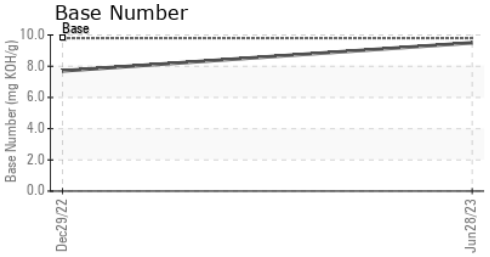
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0015803 **Received** : 03 Jul 2023
Lab Number : 05888902 **Diagnosed** : 05 Jul 2023
Unique Number : 10539385 **Diagnostician** : Don Baldridge
Test Package : MOB 2 (Additional Tests: PercentFuel)

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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