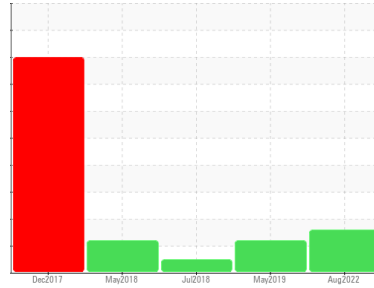




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
901038

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done.

Wear

All component wear rates are normal.

Contamination

Insufficient sample was received to conduct all the routine laboratory tests. There is a moderate concentration of dirt present in the oil.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0044530	GFL90000227	GFL31493484
Sample Date	Client Info		24 Aug 2022	06 May 2019	03 Jul 2018
Machine Age	kms	Client Info	150040	0	0
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	MARGINAL	NORMAL

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	0	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	11	21	8
Chromium	ppm	ASTM D5185(m) >20	0	0	0
Nickel	ppm	ASTM D5185(m) >4	0	1	0
Titanium	ppm	ASTM D5185(m)	<1	1	0
Silver	ppm	ASTM D5185(m) >3	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	3	2	1
Lead	ppm	ASTM D5185(m) >40	3	2	0
Copper	ppm	ASTM D5185(m) >330	2	33	1
Tin	ppm	ASTM D5185(m) >15	<1	2	1
Antimony	ppm	ASTM D5185(m)	<1	0	0
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	4	6	3
Barium	ppm	ASTM D5185(m) 0	0	0	1
Molybdenum	ppm	ASTM D5185(m) 60	55	71	60
Manganese	ppm	ASTM D5185(m) 0	<1	---	---
Magnesium	ppm	ASTM D5185(m) 1010	868	983	989
Calcium	ppm	ASTM D5185(m) 1070	1163	1050	1039
Phosphorus	ppm	ASTM D5185(m) 1150	932	1000	1000
Zinc	ppm	ASTM D5185(m) 1270	1141	1200	1123
Sulfur	ppm	ASTM D5185(m) 2060	2512	---	---
Lithium	ppm	ASTM D5185(m)	<1	0	0

CONTAMINANTS

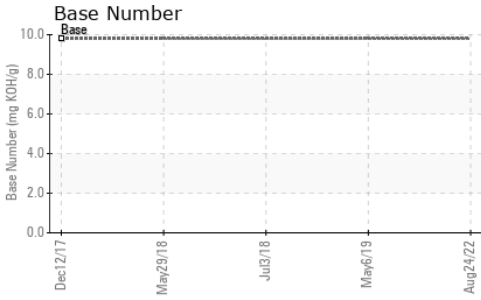
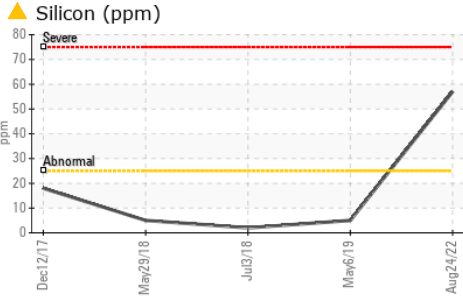
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	▲ 57	5	2
Sodium	ppm	ASTM D5185(m)	10	▲ 60	19
Potassium	ppm	ASTM D5185(m) >20	2	7	3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Base Number (BN)	mg KOH/g	ASTM D2896* 9.8	8.38	---	---



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	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 9998 - Moved No Longer Used Units
Sample No. : GFL0044530 **Received** : 02 Sep 2022 CANADIAN UNITS
Lab Number : **02508867** **Tested** : 06 Sep 2022
Unique Number : 5449837 **Diagnosed** : 06 Sep 2022 - Kevin Marson CA
Test Package : TEST (Additional Tests: ICP, TBN) Contact: Service Manager

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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F: