



Machine Id
427063-402195
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0064667	GFL0046856	GFL0037280
Sample Date		Client Info		06 Jan 2023	09 Dec 2022	22 Nov 2021
Machine Age	hrs	Client Info		37118	37007	34951
Oil Age	hrs	Client Info		0	34951	34951
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	SEVERE	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	4	21	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	1	2
Lead	ppm	ASTM D5185m	>40	3	21	6
Copper	ppm	ASTM D5185m	>330	6	14	12
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

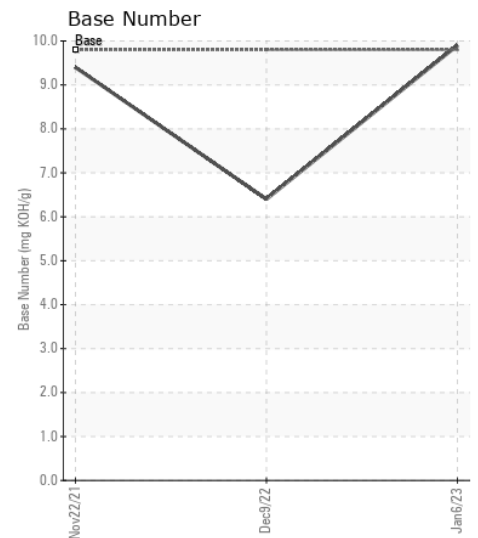
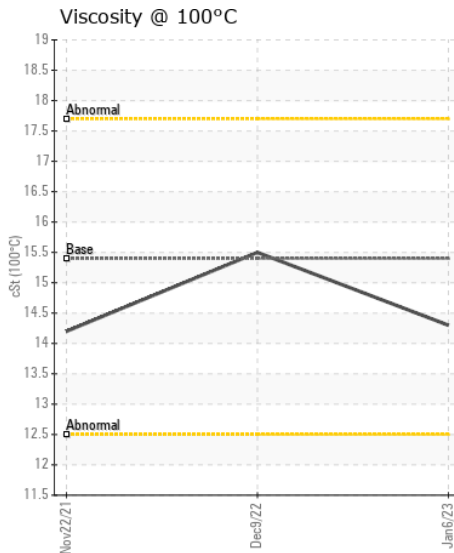
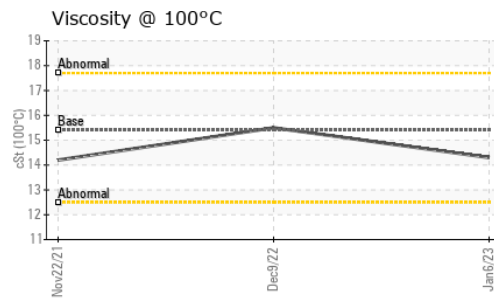
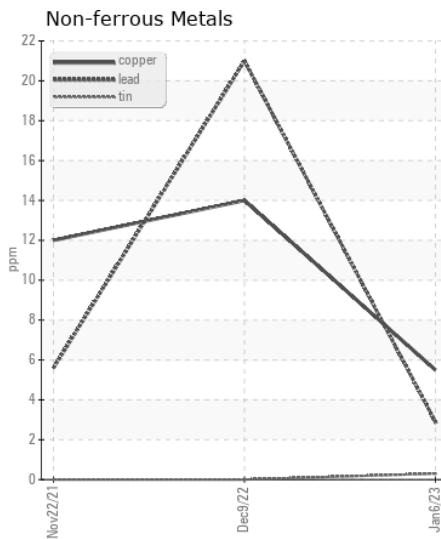
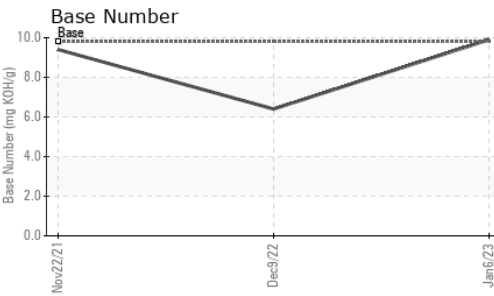
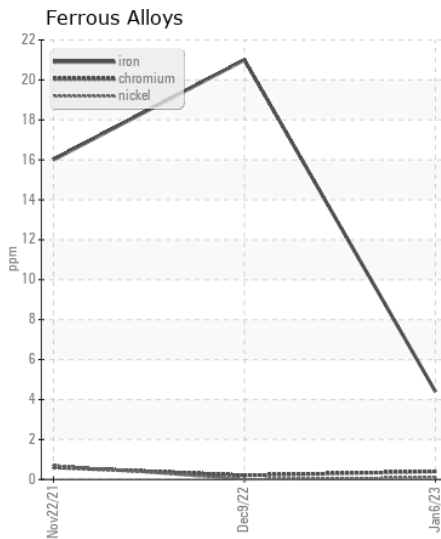
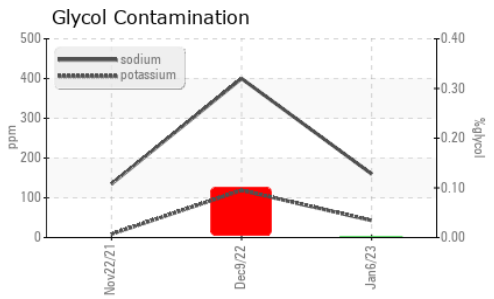
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	1	5	3
Potassium	ppm	ASTM D5185m	>20	▲ 43	▲ 119	9
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.0	0.10	NEG
Soot %	%	*ASTM D7844	>4	1.3	▲ 5.6	1.7
Nitration	Abs/cm	*ASTM D7624	>20	6.2	13.3	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	30.1	22.1
Silt	scalar	*Visual	NONE	NONE	NONE	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

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		▲ 160	▲ 400	▲ 135
Boron	ppm	ASTM D5185m	0	18	8	11
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	80	127	86
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	892	844	992
Calcium	ppm	ASTM D5185m	1070	1085	1067	1161
Phosphorus	ppm	ASTM D5185m	1150	948	922	910
Zinc	ppm	ASTM D5185m	1270	1195	1111	1082
Sulfur	ppm	ASTM D5185m	2060	3499	3244	2681
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.5	17.6	16
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.9	6.4	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	15.5	14.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0064667 **Received** : 10 Jan 2023
Lab Number : 05735513 **Diagnosed** : 11 Jan 2023
Unique Number : 10285111 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117
 Contact: Brad Koenig
 bkoenig@gflenv.com

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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F: