



Machine Id
4654M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0107746	GFL0096549	GFL0096519
Sample Date		Client Info		26 Jan 2024	24 Nov 2023	13 Nov 2023
Machine Age	hrs	Client Info		15566	15069	14975
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	MARGINAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	17	17	22
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	1
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	<1	1	0
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

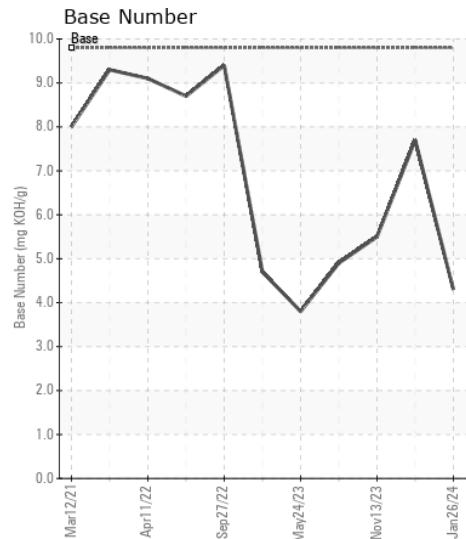
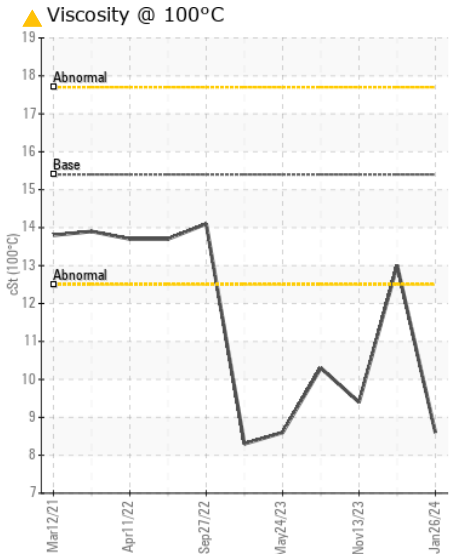
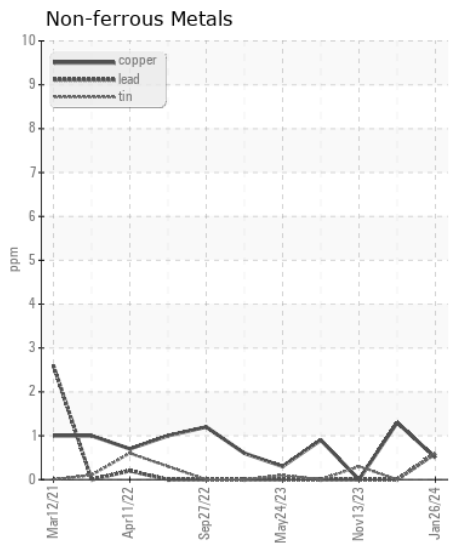
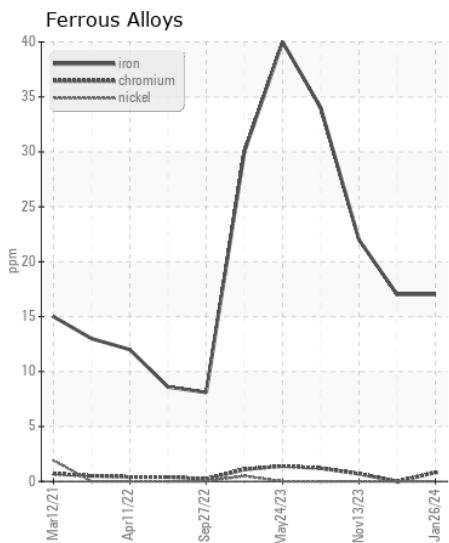
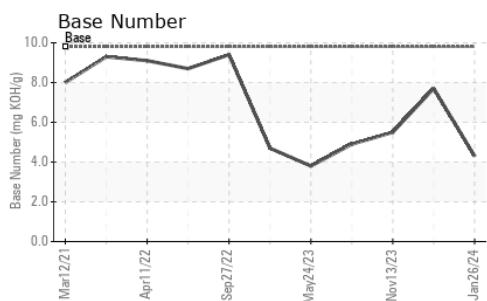
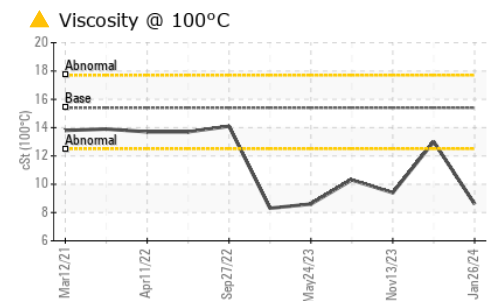
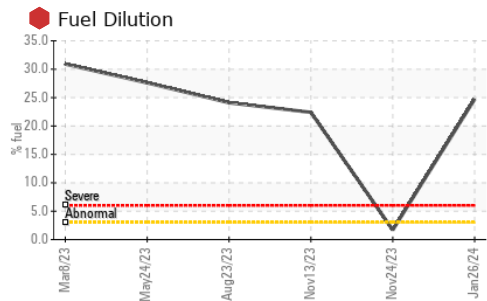
There is a high amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>25	4	2	6
Potassium	ppm	ASTM D5185m	>20	0	2	0
Fuel	%	ASTM D3524	>3.0	24.7	1.7	22.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	12.0	9.4	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	19.9	22.0
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

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		4	5	4
Boron	ppm	ASTM D5185m	0	0	1	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	42	57	44
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	604	810	742
Calcium	ppm	ASTM D5185m	1070	667	1011	797
Phosphorus	ppm	ASTM D5185m	1150	680	892	795
Zinc	ppm	ASTM D5185m	1270	786	1102	973
Sulfur	ppm	ASTM D5185m	2060	1783	2957	2125
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.2	17.2	24.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	4.3	7.7	5.5
Visc @ 100°C	cSt	ASTM D445	15.4	8.6	13.0	9.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0107746 **Received** : 01 Feb 2024
Lab Number : 06077428 **Tested** : 05 Feb 2024
Unique Number : 10859519 **Diagnosed** : 05 Feb 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 465 - Pontiac
 888 Baldwin
 Pontiac, MI
 US 48340
 Contact: Ricky Matthews
 rickymathews@gflenv.com
 T: (586)825-9514
 F:

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)