



Machine Id
924031-260251

Component
Diesel Engine

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

RECOMMENDATION

We advise that you check the fuel injection system. The oil 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		GFL0098328	GFL0098346	GFL0098384
Sample Date		Client Info		02 Jan 2024	06 Dec 2023	06 Nov 2023
Machine Age	hrs	Client Info		5105	4942	4780
Oil Age	hrs	Client Info		700	700	0
Filter Age	hrs	Client Info		700	700	0
Oil Changed		Client Info		Changed	Not Changd	N/A
Filter Changed		Client Info		Changed	Not Changd	N/A
Sample Status				SEVERE	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	5	23
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	0	1
Copper	ppm	ASTM D5185m	>330	<1	0	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

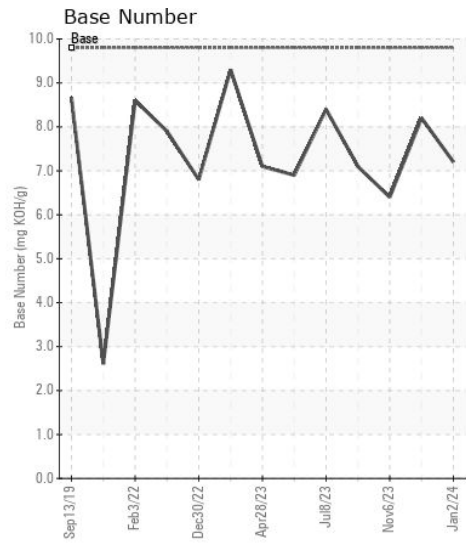
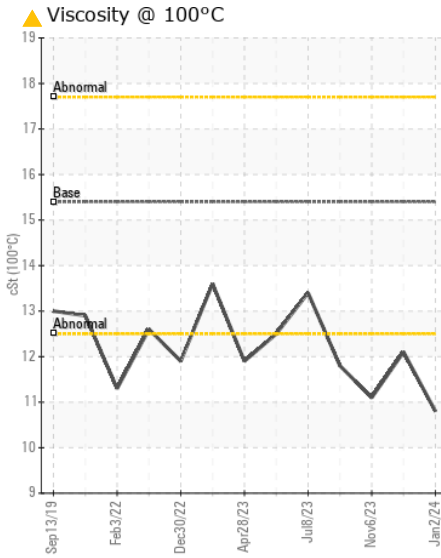
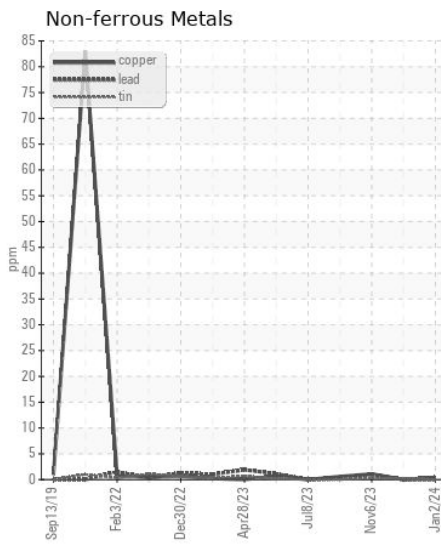
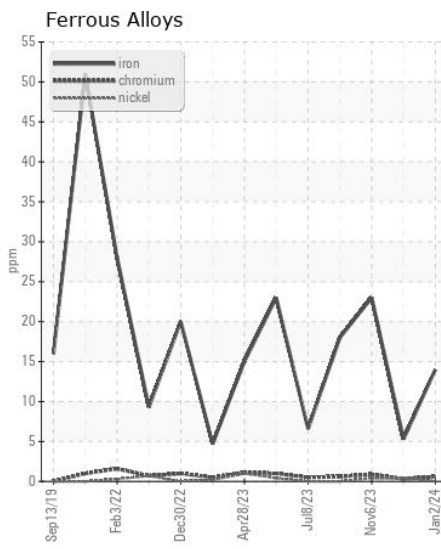
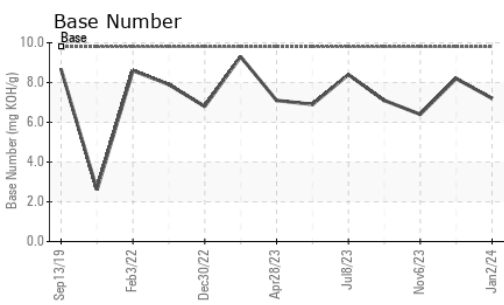
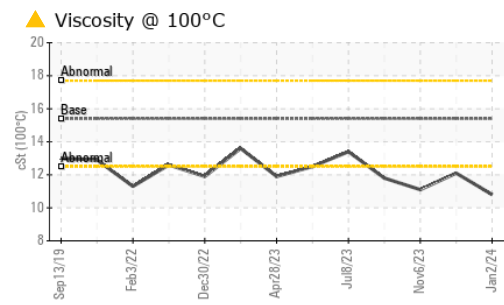
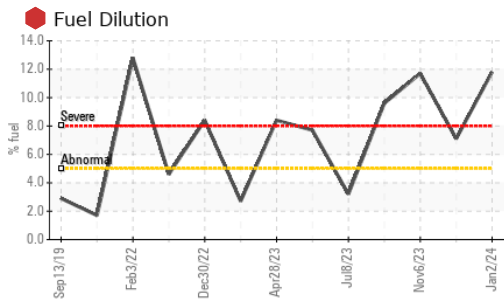
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	3	4	5
Potassium	ppm	ASTM D5185m	>20	1	3	5
Fuel	%	ASTM D3524	>5	11.8	7.1	11.7
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.3	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.5	7.2	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	18.5	20.9
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. 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		37	23	60
Boron	ppm	ASTM D5185m	0	0	1	1
Barium	ppm	ASTM D5185m	0	0	0	<1
Molybdenum	ppm	ASTM D5185m	60	55	56	63
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	826	864	840
Calcium	ppm	ASTM D5185m	1070	864	941	946
Phosphorus	ppm	ASTM D5185m	1150	906	999	887
Zinc	ppm	ASTM D5185m	1270	1083	1167	1107
Sulfur	ppm	ASTM D5185m	2060	2512	2888	2565
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	14.5	18.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.2	8.2	6.4
Visc @ 100°C	cSt	ASTM D445	15.4	10.8	12.1	11.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098328 **Received** : 16 Jan 2024
Lab Number : 06060709 **Diagnosed** : 18 Jan 2024
Unique Number : 10832091 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 822 - Springfield Hauling
 2120 West Bennett Street
 Springfield, MO
 US 65807
 Contact: Dennis Moore
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 T: (417)403-3641
 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)