



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
429042-402342

Component
Diesel Engine

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

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0109236	GFL0098347	GFL0098279
Sample Date		Client Info		19 Feb 2024	08 Dec 2023	22 Nov 2023
Machine Age	hrs	Client Info		16724	16361	16297
Oil Age	hrs	Client Info		150	700	150
Filter Age	hrs	Client Info		150	700	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Changed	Not Changd	N/A
Sample Status				ABNORMAL	MARGINAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	14	2	15
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	1	<1
Lead	ppm	ASTM D5185m	>45	<1	0	<1
Copper	ppm	ASTM D5185m	>85	<1	0	1
Tin	ppm	ASTM D5185m	>4	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

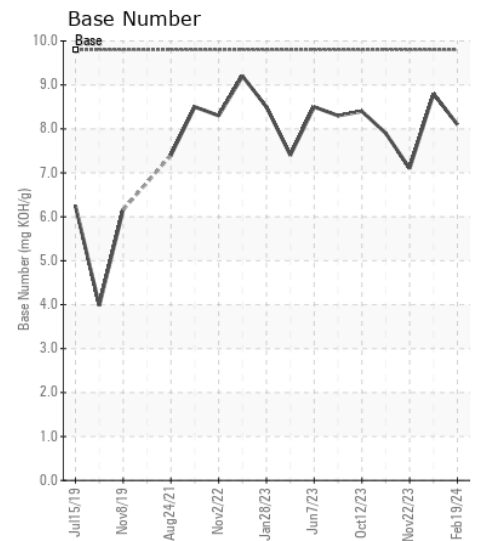
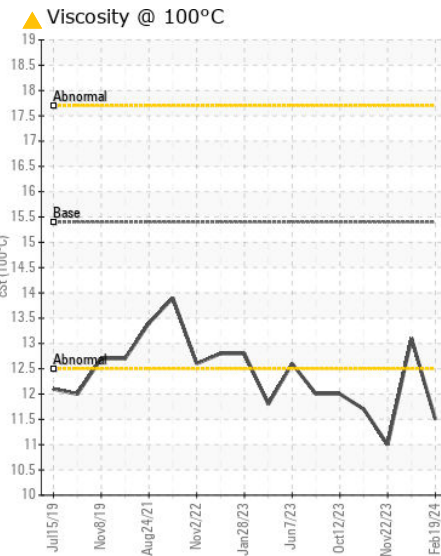
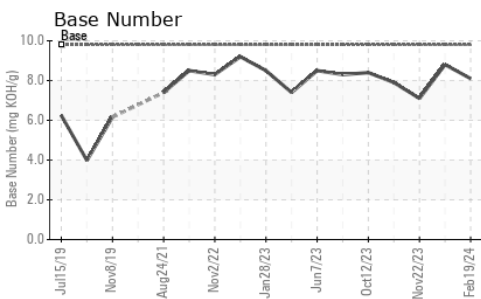
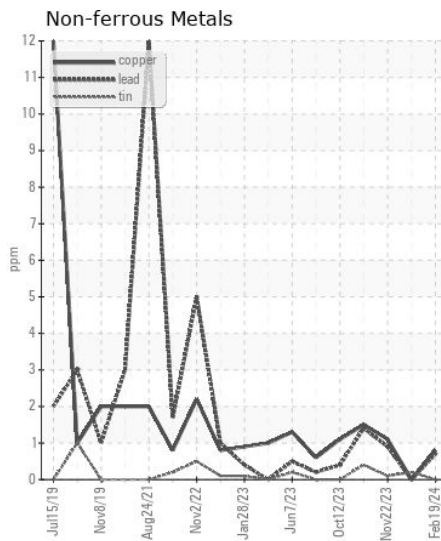
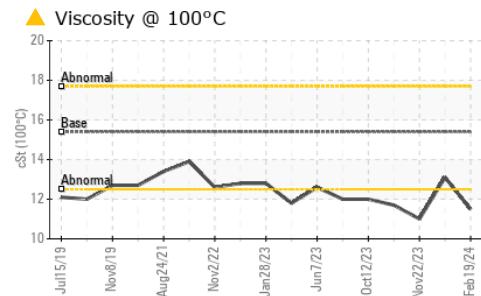
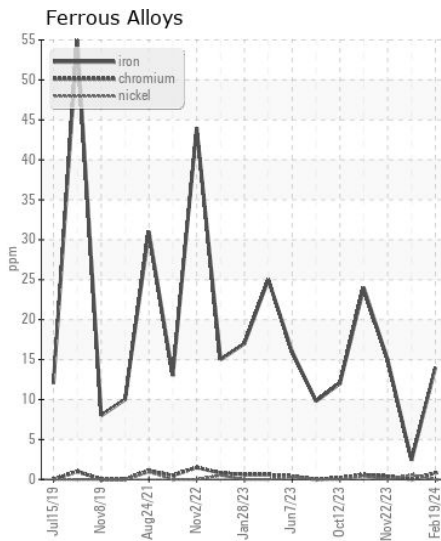
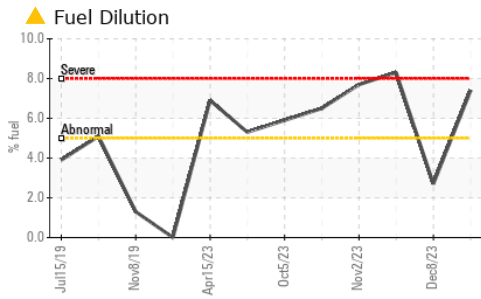
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>30	7	2	3
Potassium	ppm	ASTM D5185m	>20	4	2	0
Fuel	%	ASTM D3524	>5	▲ 7.4	▲ 2.7	■ 8.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.2	0.8
Nitration	Abs/cm	*ASTM D7624	>20	8.1	5.2	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	17.4	20.5
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		11	1	4
Boron	ppm	ASTM D5185m	0	0	2	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	56	56	53
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	949	891	843
Calcium	ppm	ASTM D5185m	1070	1025	951	988
Phosphorus	ppm	ASTM D5185m	1150	1011	1022	995
Zinc	ppm	ASTM D5185m	1270	1209	1195	1097
Sulfur	ppm	ASTM D5185m	2060	2949	3035	2517
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	13.0	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.1	8.8	7.1
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.5	13.1	▲ 11.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109236 **Received** : 23 Feb 2024
Lab Number : 06098991 **Tested** : 27 Feb 2024
Unique Number : 10897221 **Diagnosed** : 27 Feb 2024 - Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, 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)