



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
226015
 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		GFL0110198	GFL0110178	GFL0060487
Sample Date		Client Info		24 May 2024	08 Jan 2024	16 Aug 2023
Machine Age	mls	Client Info		166440	163365	158957
Oil Age	mls	Client Info		3075	0	0
Filter Age	mls	Client Info		3075	0	0
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	43	39	26
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	4	5	1
Copper	ppm	ASTM D5185m	>330	4	5	2
Tin	ppm	ASTM D5185m	>15	<1	2	<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

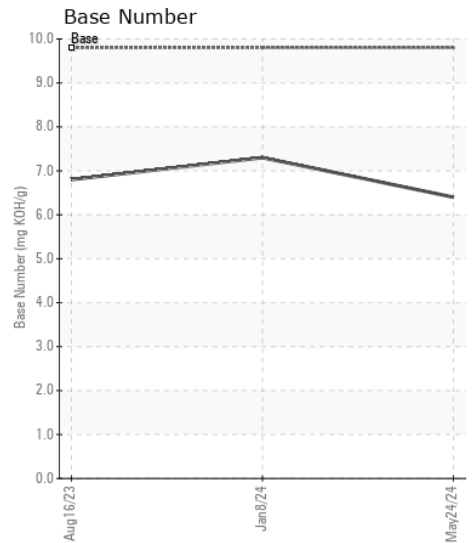
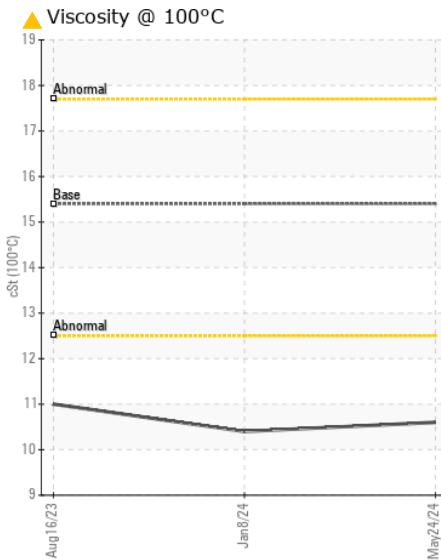
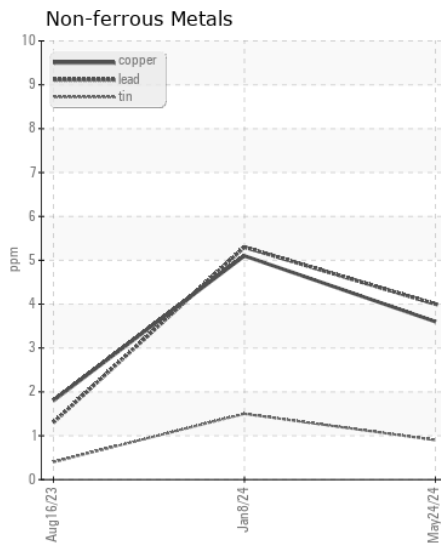
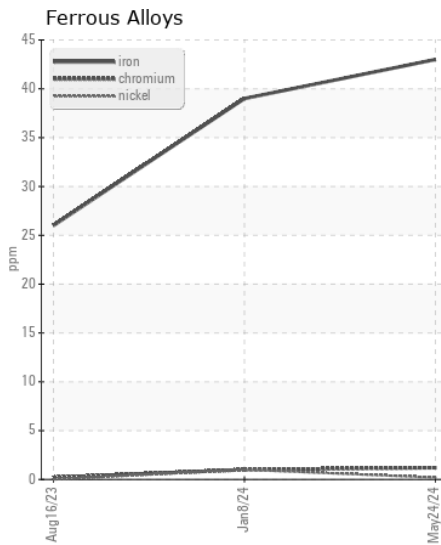
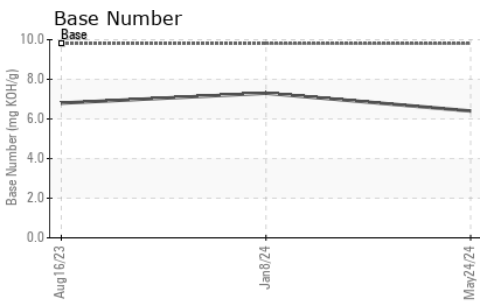
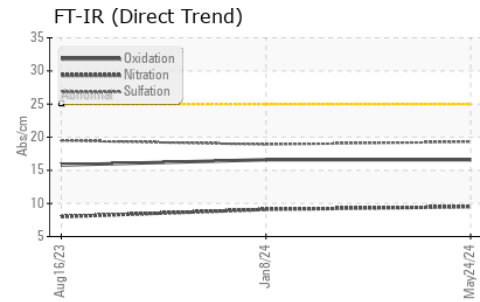
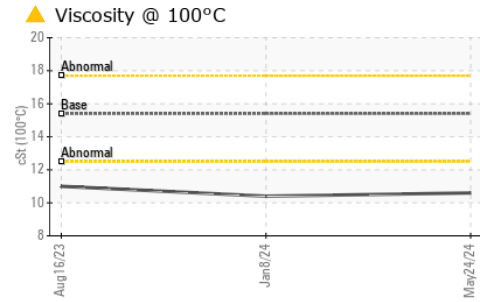
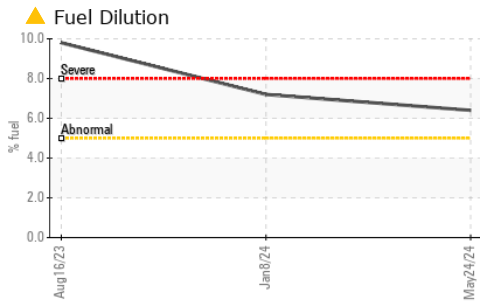
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	11	16	5
Potassium	ppm	ASTM D5185m	>20	<1	3	4
Fuel	%	ASTM D3524	>5	▲ 6.4	▲ 7.2	▲ 9.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.1	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	18.9	19.5
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. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		1	<1	2
Boron	ppm	ASTM D5185m	0	7	20	132
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	60	62	72	17
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	920	863	208
Calcium	ppm	ASTM D5185m	1070	1235	1289	1841
Phosphorus	ppm	ASTM D5185m	1150	1091	1120	874
Zinc	ppm	ASTM D5185m	1270	1350	1282	1068
Sulfur	ppm	ASTM D5185m	2060	3719	3654	3508
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	16.6	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.4	7.3	6.8
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 10.6	▲ 10.4	▲ 11.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110198 **Received** : 28 May 2024
Lab Number : 06193335 **Tested** : 30 May 2024
Unique Number : 11050087 **Diagnosed** : 30 May 2024 - Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 660 - Lynchburg Hauling
 2410 Mayflower Drive
 Lynchburg, VA
 US 24501
 Contact: Delbert Beasley
 dbeasley@countycycling.net
 T: (434)665-5998
 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)