



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL



Machine Id
4630M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (36 QTS)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110091	GFL0110057	GFL0104280
Sample Date		Client Info		06 Feb 2024	24 Jan 2024	27 Dec 2023
Machine Age	hrs	Client Info		19752	19639	181276
Oil Age	hrs	Client Info		600	600	162265
Filter Age	hrs	Client Info		600	600	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				MARGINAL	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	12	35	20
Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	4	5
Lead	ppm	ASTM D5185m	>25	<1	0	0
Copper	ppm	ASTM D5185m	>100	4	4	1
Tin	ppm	ASTM D5185m	>4	<1	<1	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

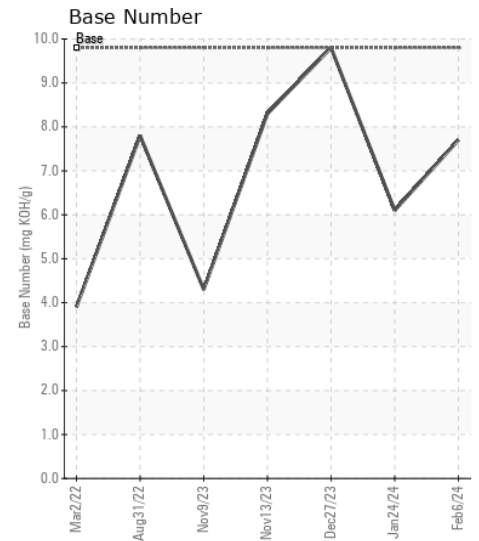
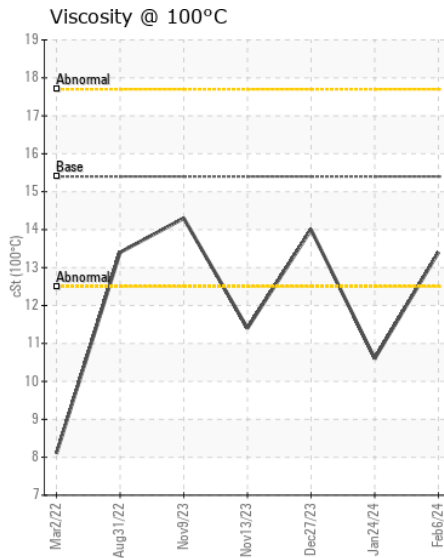
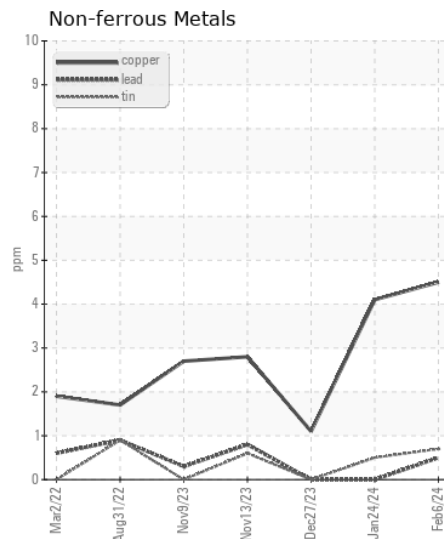
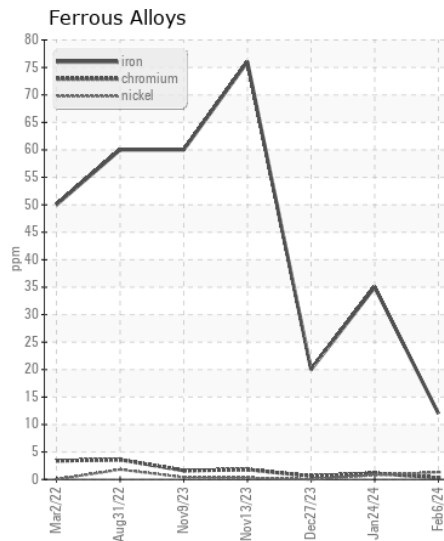
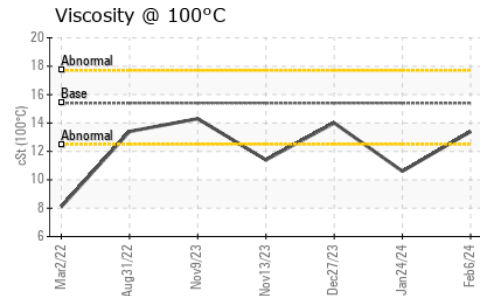
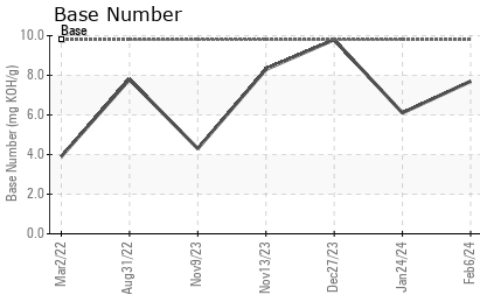
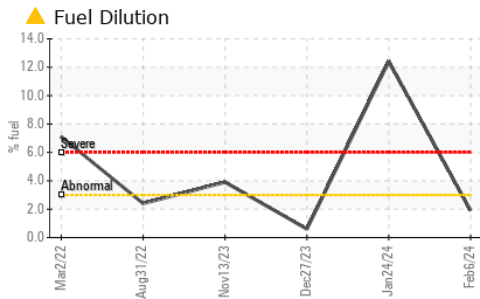
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	5	20	10
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel	%	ASTM D3524	>3.0	▲ 1.9	12.4	0.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	0.7	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.1	10.6	5.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	21.1	17.5
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 condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	8	5
Boron	ppm	ASTM D5185m	0	<1	<1	5
Barium	ppm	ASTM D5185m	0	<1	<1	0
Molybdenum	ppm	ASTM D5185m	60	57	45	59
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	879	716	942
Calcium	ppm	ASTM D5185m	1070	988	793	1096
Phosphorus	ppm	ASTM D5185m	1150	931	758	1032
Zinc	ppm	ASTM D5185m	1270	1158	935	1255
Sulfur	ppm	ASTM D5185m	2060	2890	1996	3226
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	20.1	13.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.7	6.1	9.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	10.6	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110091 **Received** : 08 Feb 2024
Lab Number : 06083390 **Tested** : 09 Feb 2024
Unique Number : 10870835 **Diagnosed** : 09 Feb 2024 - Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
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 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)