



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Area
(61AATE4)
Machine Id
214009
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0121422	GFL0115820	GFL0113687
Sample Date		Client Info		16 May 2024	05 Apr 2024	22 Feb 2024
Machine Age	hrs	Client Info		532	404	144
Oil Age	hrs	Client Info		532	404	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	ATTENTION

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	83	63	52
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	13	10	8
Lead	ppm	ASTM D5185m	>40	<1	1	0
Copper	ppm	ASTM D5185m	>330	85	73	51
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

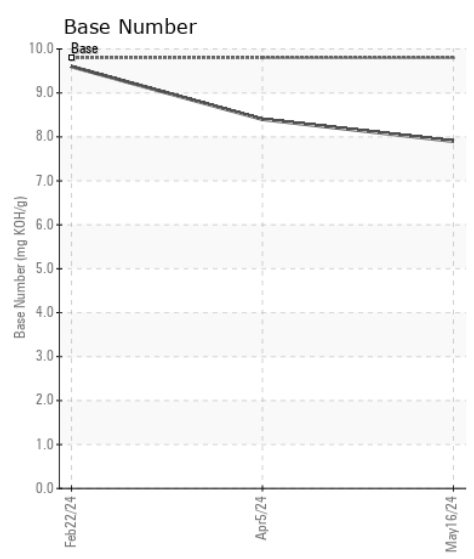
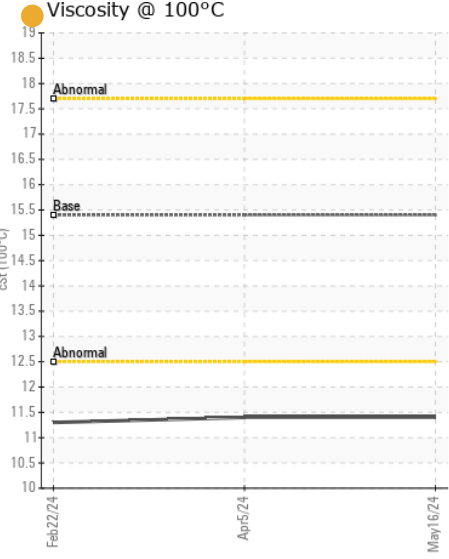
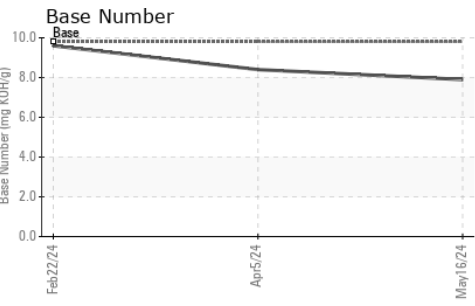
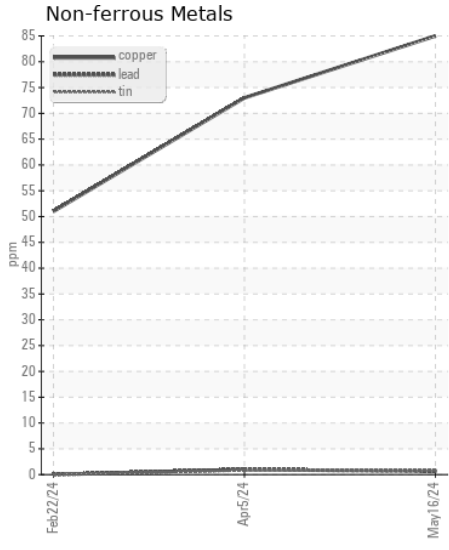
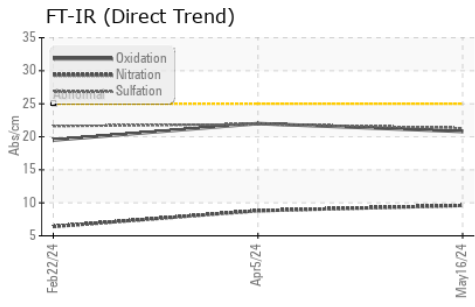
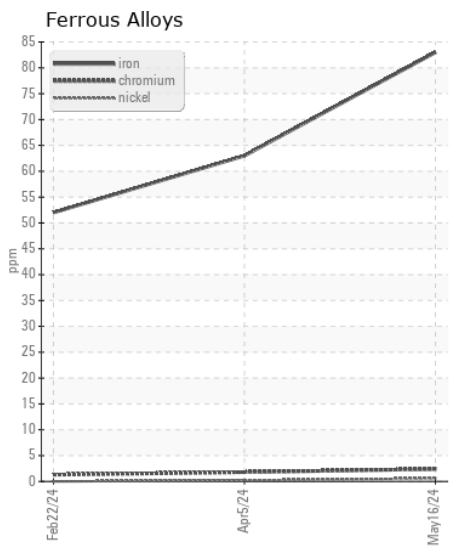
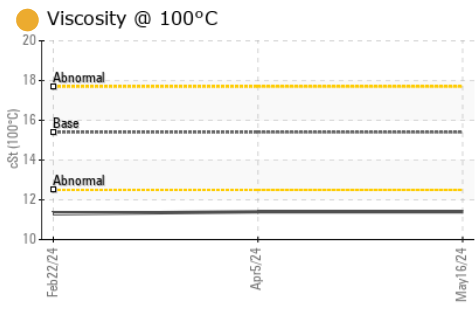
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	31	27	26
Potassium	ppm	ASTM D5185m	>20	24	26	12
Fuel		WC Method	>3.0	<1.0	<1.0	0.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.6	8.8	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	21.9	21.6
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		6	8	7
Boron	ppm	ASTM D5185m	0	46	47	57
Barium	ppm	ASTM D5185m	0	8	6	5
Molybdenum	ppm	ASTM D5185m	60	45	40	44
Manganese	ppm	ASTM D5185m	0	6	5	5
Magnesium	ppm	ASTM D5185m	1010	558	525	553
Calcium	ppm	ASTM D5185m	1070	1601	1565	1474
Phosphorus	ppm	ASTM D5185m	1150	819	718	755
Zinc	ppm	ASTM D5185m	1270	964	880	940
Sulfur	ppm	ASTM D5185m	2060	2529	2568	2537
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8	22.0	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.9	8.4	9.6
Visc @ 100°C	cSt	ASTM D445	15.4	11.4	11.4	11.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0121422 **Received** : 31 May 2024
Lab Number : 06196299 **Tested** : 03 Jun 2024
Unique Number : 11058422 **Diagnosed** : 03 Jun 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)
 13737 Plant Rd
 Childersburg, AL
 US 35044
 Contact: JONATHAN WILLIAMS
 jonathan.williams@gflenv.com

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)