



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
4635M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122380	GFL0108907	GFL0108819
Sample Date		Client Info		17 May 2024	01 Mar 2024	24 Jan 2024
Machine Age	hrs	Client Info		21749	21129	20880
Oil Age	hrs	Client Info		21129	21129	20547
Filter Age	hrs	Client Info		0	0	20547
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	17	50	13
Chromium	ppm	ASTM D5185m	>20	1	2	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	6	2
Lead	ppm	ASTM D5185m	>40	1	1	0
Copper	ppm	ASTM D5185m	>330	1	2	<1
Tin	ppm	ASTM D5185m	>15	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

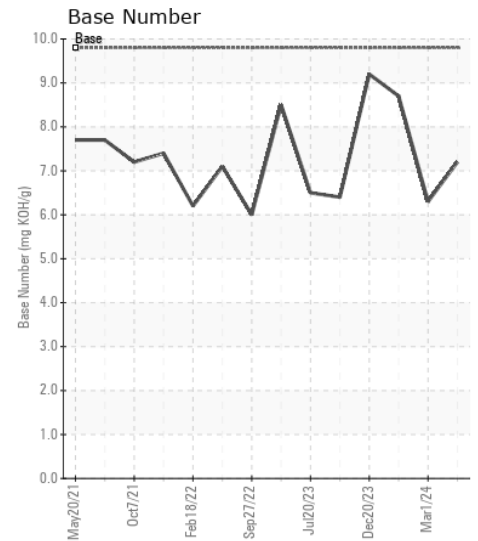
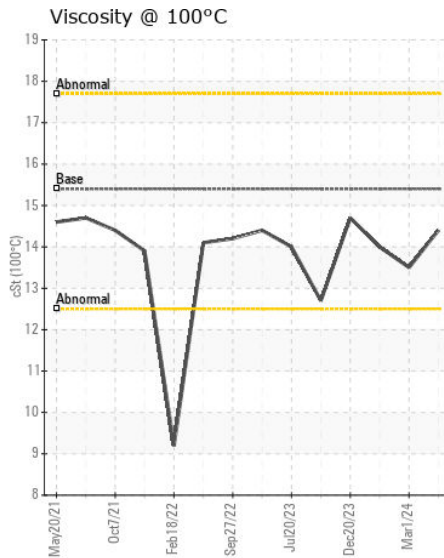
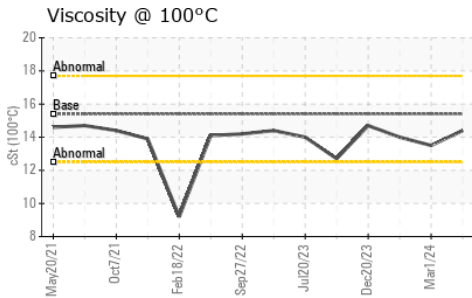
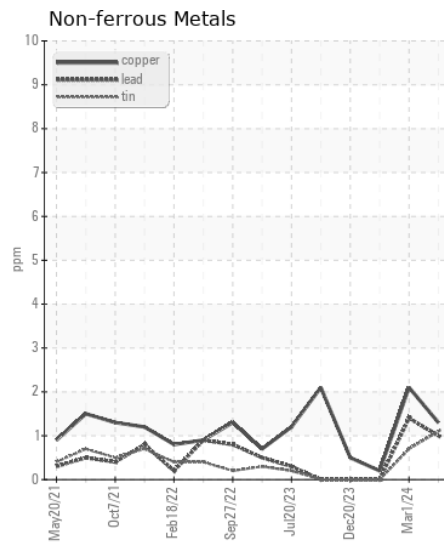
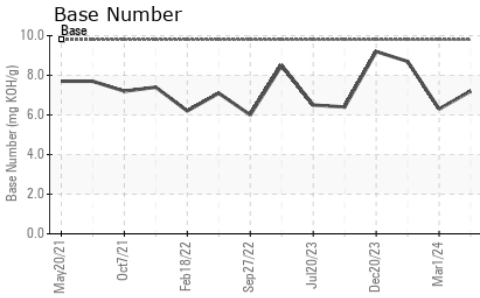
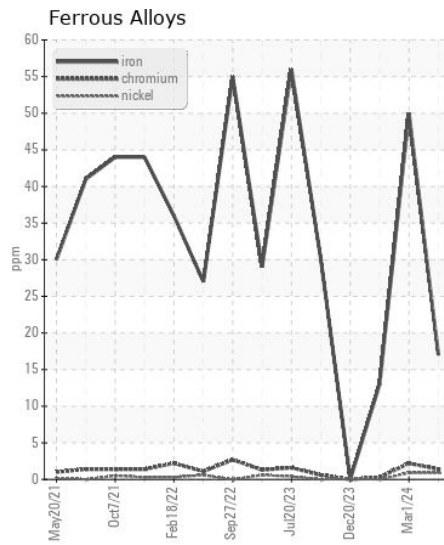
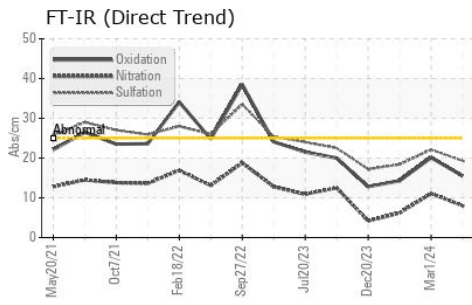
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	5
Potassium	ppm	ASTM D5185m	>20	3	7	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.5	0.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	11.1	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	22.1	18.4
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		20	8	6
Boron	ppm	ASTM D5185m	0	1	<1	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	61	69	61
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	973	1030	1003
Calcium	ppm	ASTM D5185m	1070	1122	1143	1083
Phosphorus	ppm	ASTM D5185m	1150	1094	1105	1141
Zinc	ppm	ASTM D5185m	1270	1280	1309	1311
Sulfur	ppm	ASTM D5185m	2060	3446	3123	3101
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	20.1	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.2	6.3	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	13.5	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122380
Lab Number : 06187373
Unique Number : 11044125
Test Package : FLEET

Received : 22 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Wes Davis

GFL Environmental - 415 - Michigan East
 6200 Elmridge
 Sterling Heights, MI
 US 48313
 Contact: Frank Wolak
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 T: (586)825-9514
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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)