



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
414062
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		GFL0110555	GFL0110613	GFL0100214
Sample Date		Client Info		14 Mar 2024	09 Feb 2024	15 Jan 2024
Machine Age	hrs	Client Info		10133	10133	991
Oil Age	hrs	Client Info		400	600	991
Filter Age	hrs	Client Info		400	600	991
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	23	16	13
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	6	2	2
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	9	6	5
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	187	▲ 232	33
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

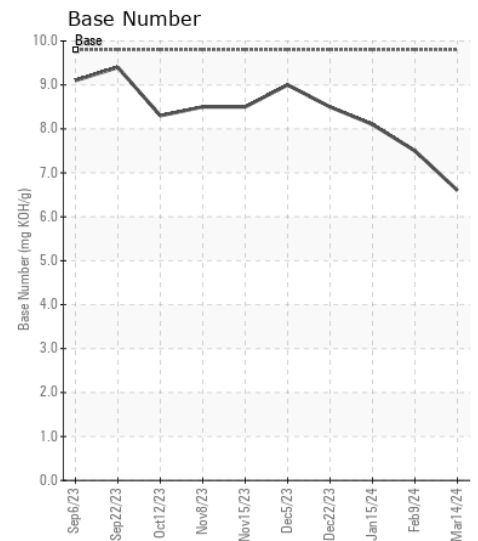
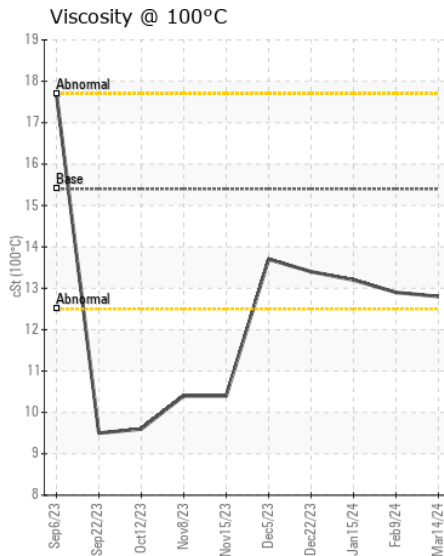
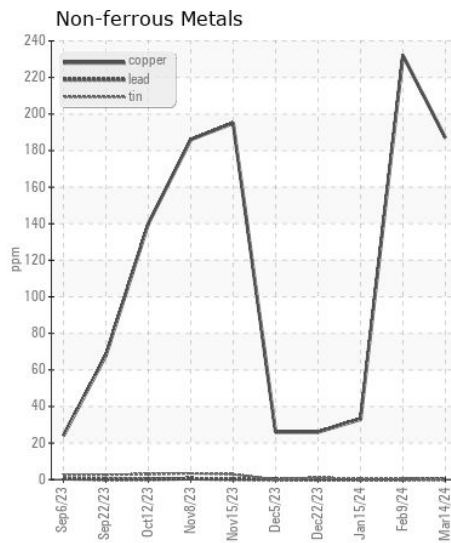
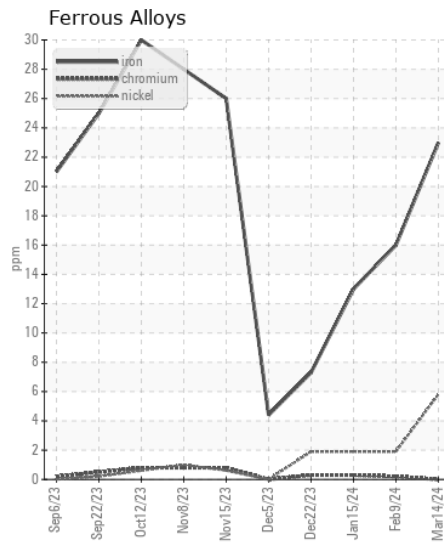
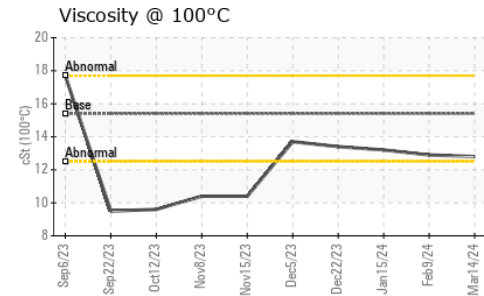
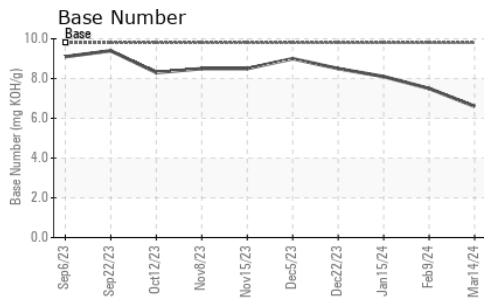
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	9	9	8
Potassium	ppm	ASTM D5185m	>20	24	21	18
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	>4	0.4	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.7	7.6	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	19.8	19.4
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		4	0	0
Boron	ppm	ASTM D5185m	0	5	7	10
Barium	ppm	ASTM D5185m	0	0	8	3
Molybdenum	ppm	ASTM D5185m	60	63	64	65
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	999	881	1006
Calcium	ppm	ASTM D5185m	1070	1142	1015	1097
Phosphorus	ppm	ASTM D5185m	1150	991	850	952
Zinc	ppm	ASTM D5185m	1270	1184	1105	1234
Sulfur	ppm	ASTM D5185m	2060	2878	2644	3107
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	15.9	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.6	7.5	8.1
Visc @ 100°C	cSt	ASTM D445	15.4	12.8	12.9	13.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110555
Lab Number : 06122023
Unique Number : 10936174
Test Package : FLEET

Received : 19 Mar 2024
Tested : 19 Mar 2024
Diagnosed : 21 Mar 2024 - Don Baldrige

GFL Environmental - 166 - Phenix City
 18 Old Brickyard Rd
 Phenix City, AL
 US 36869
 Contact: EDWARD CASHMAN
 ecashman@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)

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F: