



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(BC71231)
Machine Id
511022
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		GFL0116070	GFL0029662	GFL0092957
Sample Date		Client Info		22 May 2024	20 Feb 2024	27 Nov 2023
Machine Age	hrs	Client Info		3465	3079	2851
Oil Age	hrs	Client Info		1891	1891	1891
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	11	14	8
Chromium	ppm	ASTM D5185m	>20	1	<1	0
Nickel	ppm	ASTM D5185m	>15	2	3	2
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>3	1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	2
Lead	ppm	ASTM D5185m	>40	1	1	0
Copper	ppm	ASTM D5185m	>330	6	14	10
Tin	ppm	ASTM D5185m	>15	2	2	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

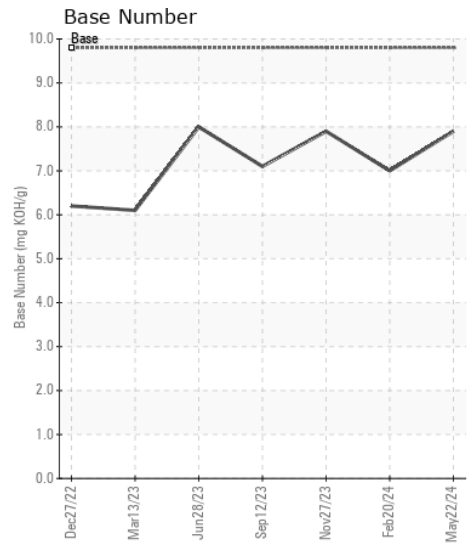
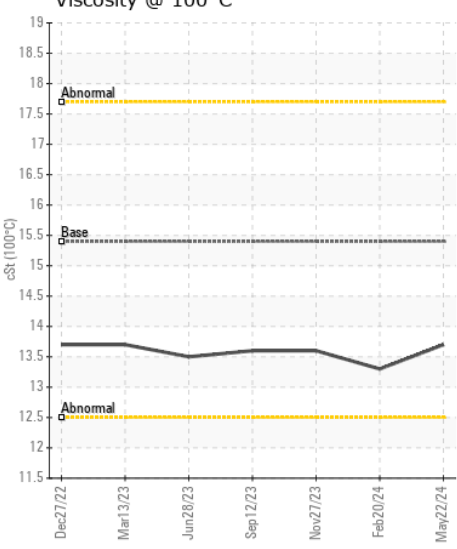
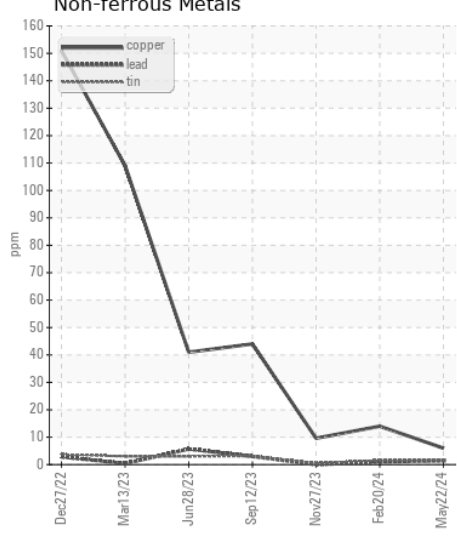
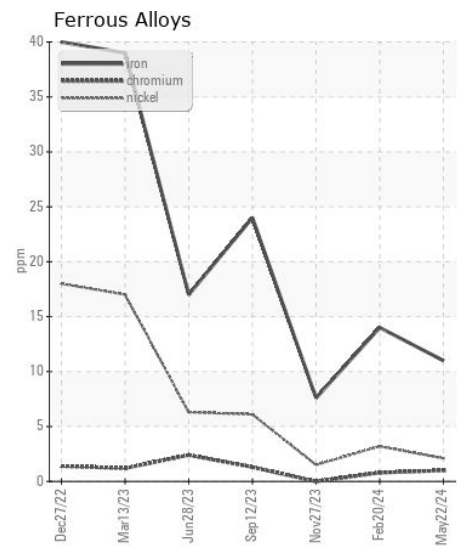
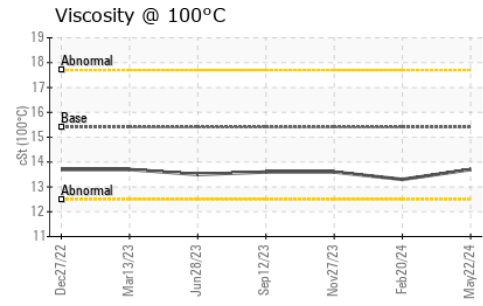
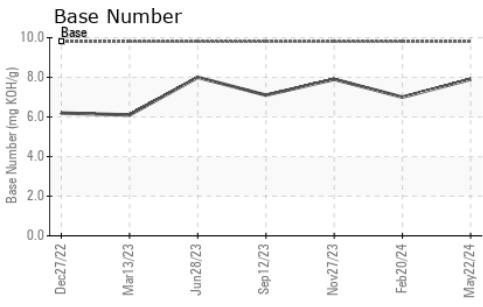
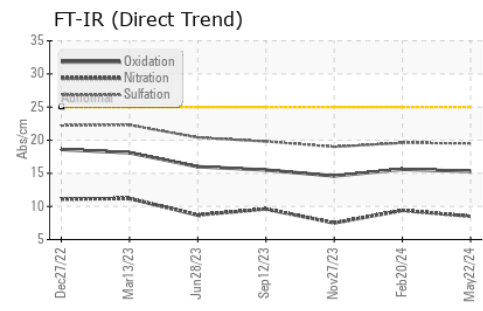
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	4
Potassium	ppm	ASTM D5185m	>20	5	7	3
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	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	8.5	9.4	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	19.6	19.0
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	1	1
Boron	ppm	ASTM D5185m	0	<1	2	1
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	63	66	61
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	1010	966	989
Calcium	ppm	ASTM D5185m	1070	1121	1038	1132
Phosphorus	ppm	ASTM D5185m	1150	1005	1028	1045
Zinc	ppm	ASTM D5185m	1270	1255	1233	1271
Sulfur	ppm	ASTM D5185m	2060	3090	2905	2979
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	15.6	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.9	7	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	13.3	13.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116070
Lab Number : 06191892
Unique Number : 11048644
Test Package : FLEET
Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 30 May 2024 - Sean Felton

GFL Environmental - 463 - Cheboygan
 501 N. Western Ave
 Cheboygan, MI
 US 49721
 Contact: Chris Gee
 cgee@gflenv.com
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Certificate L2367
 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)