



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
813045
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		GFL0125439	GFL0116140	GFL0104580
Sample Date		Client Info		12 Jun 2024	02 May 2024	18 Dec 2023
Machine Age	hrs	Client Info		1345	1206	594
Oil Age	hrs	Client Info		139	612	594
Filter Age	hrs	Client Info		139	612	594
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The nickel level has decreased, but is still abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	6	27	59
Chromium	ppm	ASTM D5185m	>20	0	2	1
Nickel	ppm	ASTM D5185m	>5	▲ 6	▲ 20	▲ 20
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	<1	1	1
Aluminum	ppm	ASTM D5185m	>20	2	2	4
Lead	ppm	ASTM D5185m	>40	0	2	<1
Copper	ppm	ASTM D5185m	>330	3	12	59
Tin	ppm	ASTM D5185m	>15	<1	3	2
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

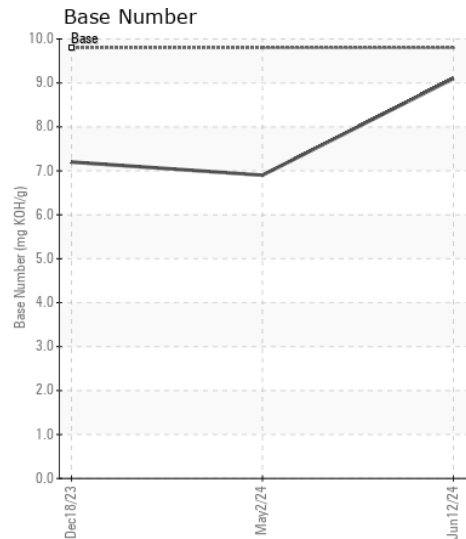
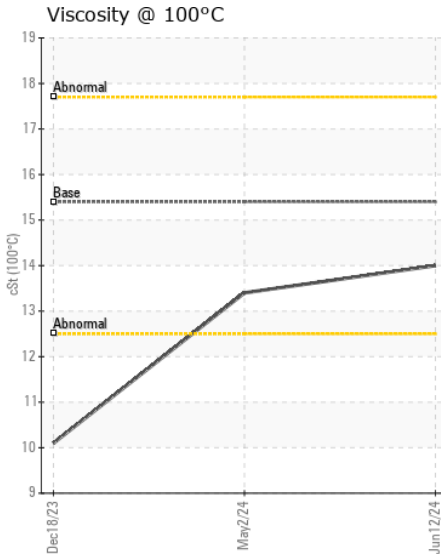
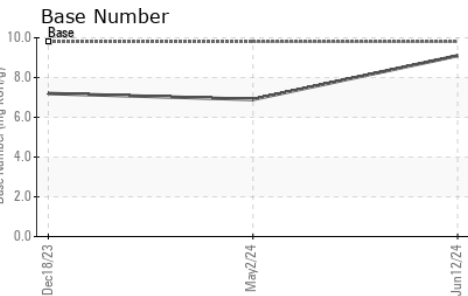
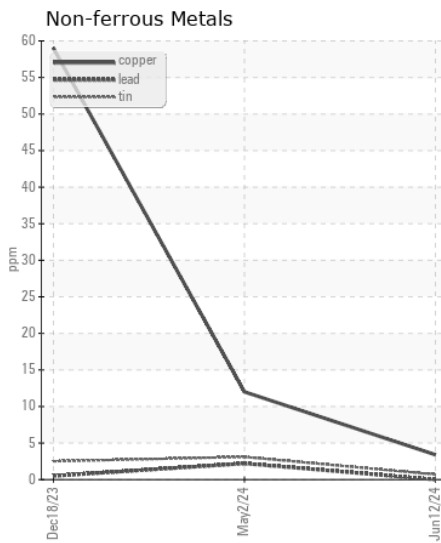
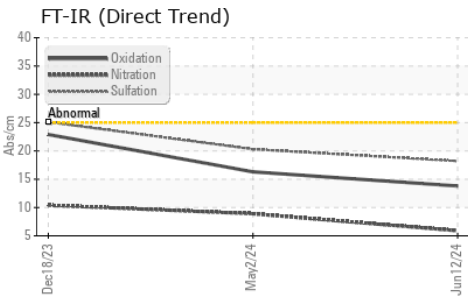
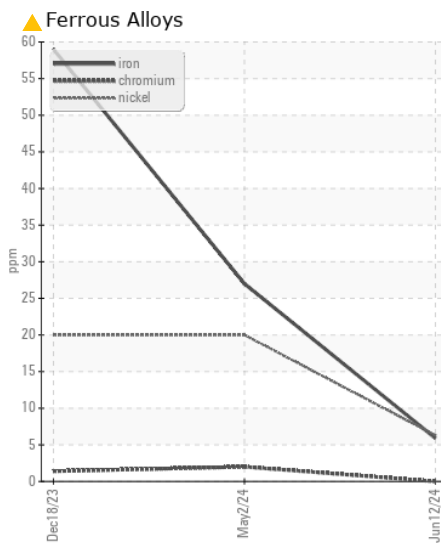
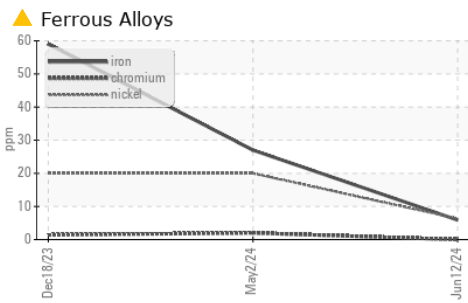
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	9	69
Potassium	ppm	ASTM D5185m	>20	3	4	12
Fuel		WC Method	>3.0	<1.0	<1.0	0.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.3	0.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	5.9	8.9	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	20.3	25.1
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		3	4	4
Boron	ppm	ASTM D5185m	0	5	6	180
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	60	102
Manganese	ppm	ASTM D5185m	0	<1	2	4
Magnesium	ppm	ASTM D5185m	1010	1014	1035	600
Calcium	ppm	ASTM D5185m	1070	1101	1212	1382
Phosphorus	ppm	ASTM D5185m	1150	1108	1085	617
Zinc	ppm	ASTM D5185m	1270	1348	1335	771
Sulfur	ppm	ASTM D5185m	2060	3836	3544	1987
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	16.3	22.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.1	6.9	7.2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.4	● 10.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125439
Lab Number : 06217552
Unique Number : 11090416
Test Package : FLEET

Received : 21 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Sean Felton

GFL Environmental - 947 - WB Horicon HC
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 Horicon, WI
 US 53032
 Contact: Tim Kieffer
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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)