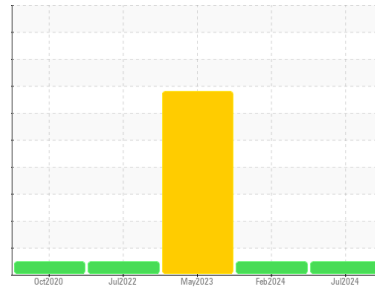




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

607053

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0091914	GFL0045465	GFL0074342
Sample Date	Client Info		05 Jul 2024	02 Feb 2024	16 May 2023
Machine Age	hrs	Client Info	85180	14027	13136
Oil Age	hrs	Client Info	600	0	0
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			NORMAL	NORMAL	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	37	64	72
Chromium	ppm	ASTM D5185m >20	1	2	1
Nickel	ppm	ASTM D5185m >2	<1	<1	<1
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	2	<1	<1
Aluminum	ppm	ASTM D5185m >25	7	9	▲ 120
Lead	ppm	ASTM D5185m >40	<1	0	<1
Copper	ppm	ASTM D5185m >330	2	8	21
Tin	ppm	ASTM D5185m >15	<1	<1	▲ 31
Vanadium	ppm	ASTM D5185m	<1	<1	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	18	71	104
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 50	88	14	17
Manganese	ppm	ASTM D5185m 0	<1	<1	2
Magnesium	ppm	ASTM D5185m 950	45	169	237
Calcium	ppm	ASTM D5185m 1050	2085	1799	1864
Phosphorus	ppm	ASTM D5185m 995	944	922	950
Zinc	ppm	ASTM D5185m 1180	1115	1144	1159
Sulfur	ppm	ASTM D5185m 2600	3095	3146	3955

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	11	17	15
Sodium	ppm	ASTM D5185m	2	5	3
Potassium	ppm	ASTM D5185m >20	2	1	2

INFRA-RED

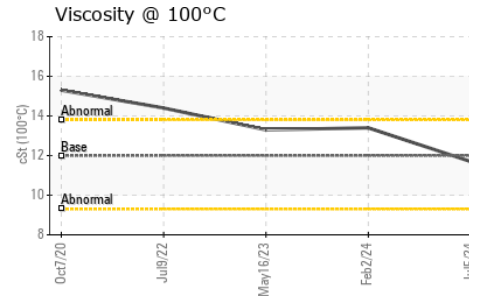
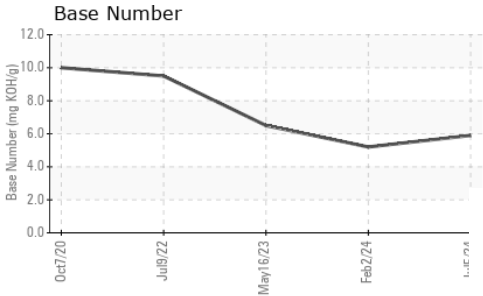
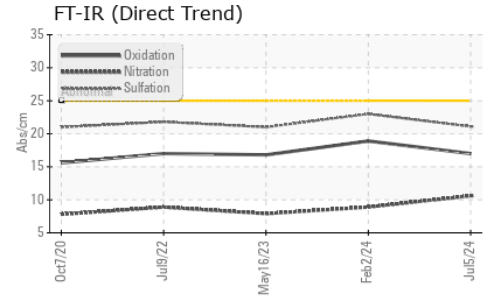
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.4	0.2
Nitration	Abs/cm	*ASTM D7624 >20	10.6	8.9	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.1	23.0	21.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.0	18.9	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	5.9	5.2	6.5



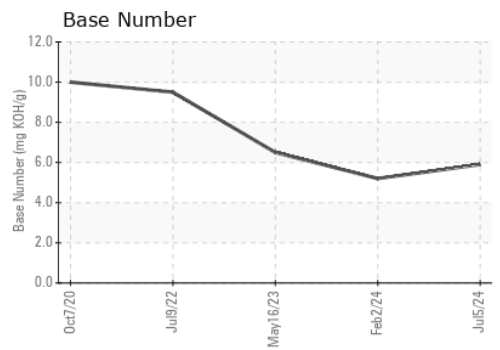
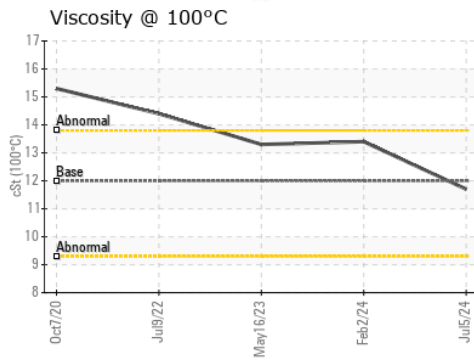
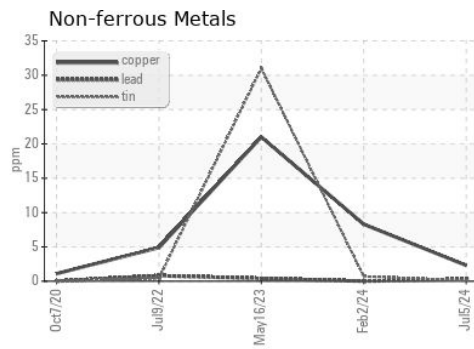
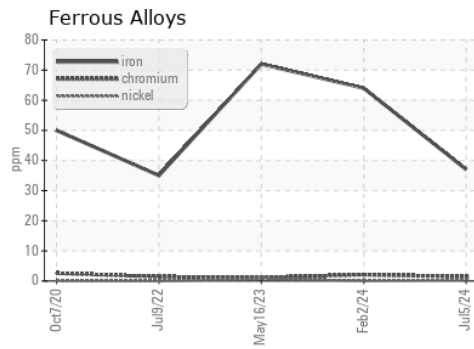
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.7	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0091914 **Received** : 16 Jul 2024
Lab Number : 06238685 **Tested** : 17 Jul 2024
Unique Number : 11127519 **Diagnosed** : 18 Jul 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: TECHNICIAN ACCOUNT
 catherine.anastasio@wearcheck.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)