

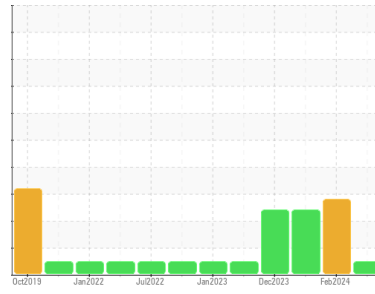


OIL ANALYSIS REPORT



Machine Id
427087-402443
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0125203	GFL0103996	GFL0100552
Sample Date	Client Info	18 Jun 2024	06 Feb 2024	08 Jan 2024
Machine Age	hrs	338479	18460	18356
Oil Age	hrs	0	0	18356
Oil Changed	Client Info	Changed	Changed	Not Changed
Sample Status		NORMAL	SEVERE	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
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 >120	6	2	5
Chromium	ppm ASTM D5185m >20	0	0	0
Nickel	ppm ASTM D5185m >5	<1	0	0
Titanium	ppm ASTM D5185m >2	<1	0	0
Silver	ppm ASTM D5185m >2	<1	0	0
Aluminum	ppm ASTM D5185m >20	2	1	4
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	11	<1	12
Tin	ppm ASTM D5185m >15	<1	0	0
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	14	4	34
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	12	28	55
Manganese	ppm ASTM D5185m 0	1	0	<1
Magnesium	ppm ASTM D5185m 1010	82	452	723
Calcium	ppm ASTM D5185m 1070	2434	951	1056
Phosphorus	ppm ASTM D5185m 1150	947	680	940
Zinc	ppm ASTM D5185m 1270	1177	829	1105
Sulfur	ppm ASTM D5185m 2060	4210	2178	2866

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	3	7
Sodium	ppm ASTM D5185m	3	1	19
Potassium	ppm ASTM D5185m >20	4	6	23
Fuel	% ASTM D3524 >3.0	1.6	▲ 33.8	▲ 12.0

INFRA-RED

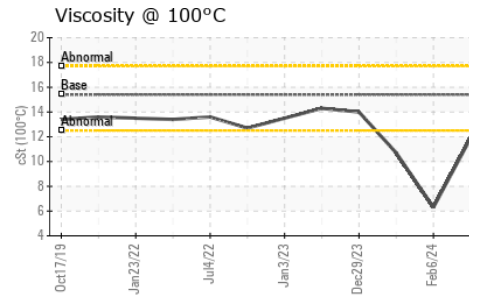
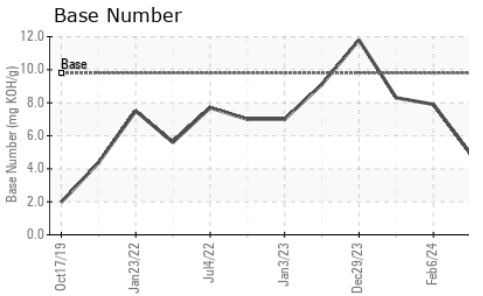
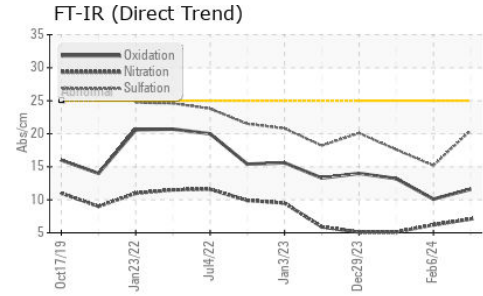
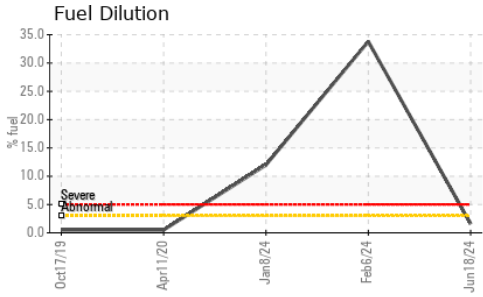
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	7.1	6.2	5.1
Sulfation	Abs/.1mm *ASTM D7415 >30	20.5	15.2	17.6

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	11.6	10.1	13.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	4.9	7.9	8.3



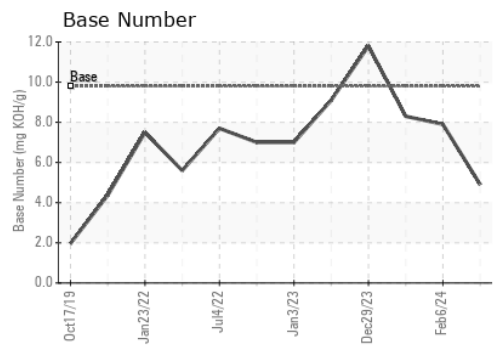
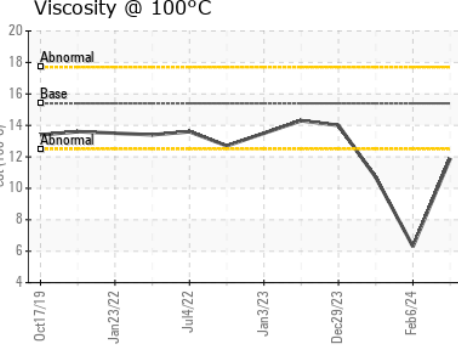
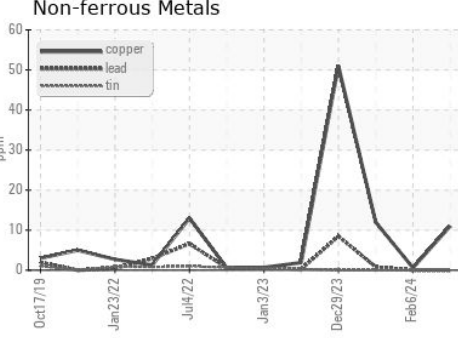
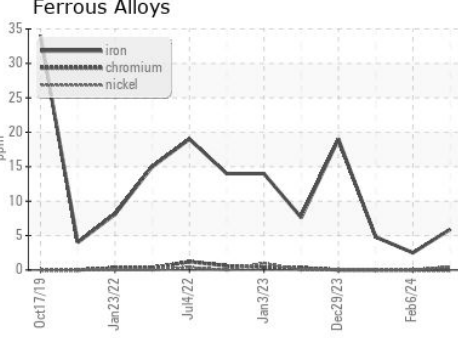
OIL ANALYSIS REPORT



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	NONE
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	15.4	11.9	▲ 6.3 ▲ 10.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125203 **Received** : 27 Jun 2024
Lab Number : 06222974 **Tested** : 01 Jul 2024
Unique Number : 11101171 **Diagnosed** : 01 Jul 2024 - Angela Borella
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
 saul.castillo@gflenv.com
 T:
 F:

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)