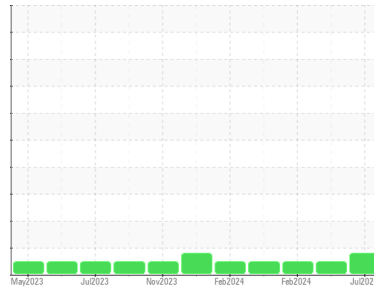




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
412008
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Valve wear is indicated.

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		GFL0091881	GFL0112775	GFL0112728
Sample Date	Client Info		02 Jul 2024	02 Apr 2024	23 Feb 2024
Machine Age	hrs	Client Info	4016	3483	3003
Oil Age	hrs	Client Info	3483	2981	2981
Oil Changed	Client Info		N/A	Changed	N/A
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	11	8	3
Chromium	ppm	ASTM D5185m >20	<1	1	<1
Nickel	ppm	ASTM D5185m >5	▲ 11	3	<1
Titanium	ppm	ASTM D5185m >2	0	<1	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >20	1	2	2
Lead	ppm	ASTM D5185m >40	0	<1	<1
Copper	ppm	ASTM D5185m >330	2	2	3
Tin	ppm	ASTM D5185m >15	0	1	<1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	2	<1	3
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	57	59	58
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	965	973	909
Calcium	ppm	ASTM D5185m 1070	1136	1061	989
Phosphorus	ppm	ASTM D5185m 1150	1007	1064	1042
Zinc	ppm	ASTM D5185m 1270	1238	1248	1241
Sulfur	ppm	ASTM D5185m 2060	3310	3043	3085

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	6	8
Sodium	ppm	ASTM D5185m	4	5	4
Potassium	ppm	ASTM D5185m >20	1	2	23

INFRA-RED

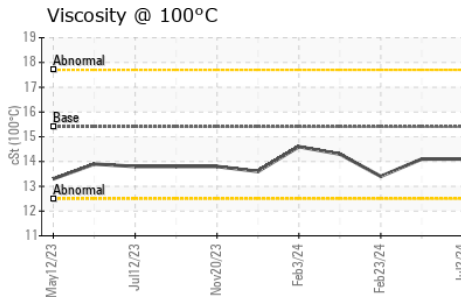
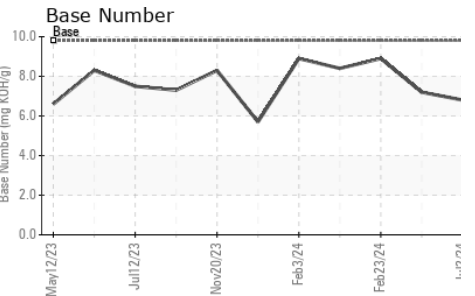
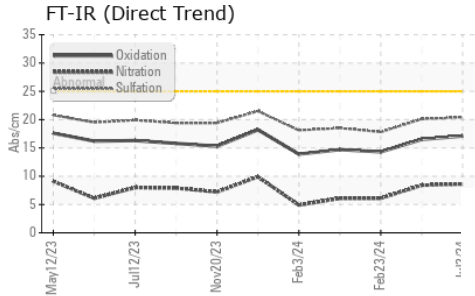
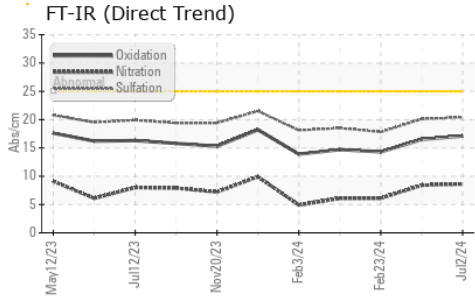
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.3	0.3	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.6	8.4	6.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.4	20.1	17.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.1	16.5	14.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.8	7.2	8.9



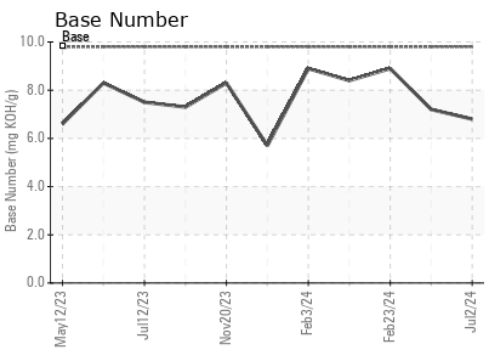
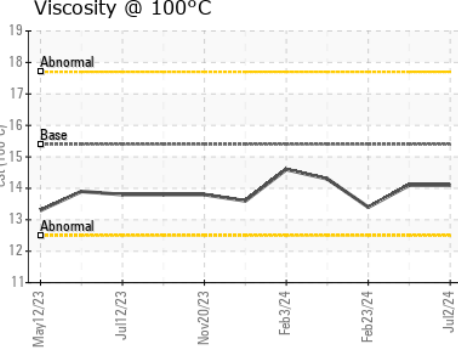
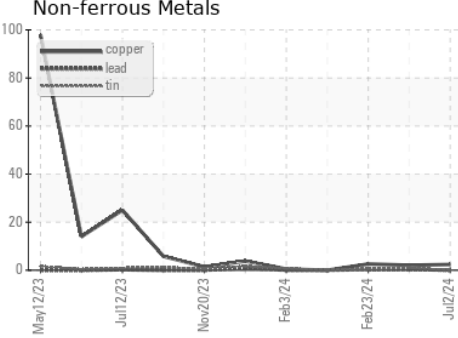
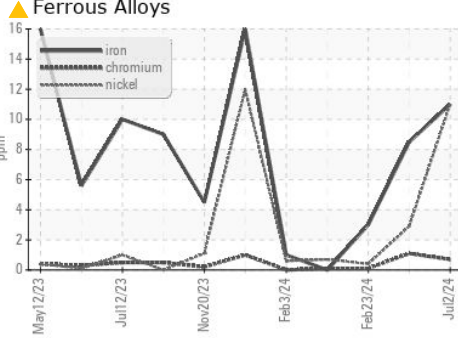
OIL ANALYSIS REPORT



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	14.1	14.1	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0091881 **Received** : 05 Jul 2024
Lab Number : 06229470 **Tested** : 09 Jul 2024
Unique Number : 11112963 **Diagnosed** : 09 Jul 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: Jimmy Mayes
 jmayes@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)