

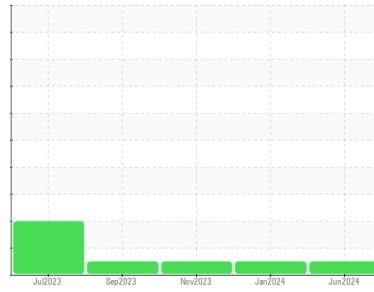


OIL ANALYSIS REPORT



Area
(YA171066)
 Machine Id
713009
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



NORMAL



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	GFL0104064	GFL0068108	GFL0068127
Sample Date	Client Info	11 Jun 2024	12 Jan 2024	02 Nov 2023
Machine Age	hrs	3002	2396	1860
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	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	8	13	6
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >5	1	0	<1
Titanium	ppm ASTM D5185m >2	0	0	0
Silver	ppm ASTM D5185m >2	<1	0	0
Aluminum	ppm ASTM D5185m >20	2	2	3
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	3	3	11
Tin	ppm ASTM D5185m >15	<1	2	<1
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	7	5	5
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	57	58	61
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	936	980	954
Calcium	ppm ASTM D5185m 1070	1121	1116	1083
Phosphorus	ppm ASTM D5185m 1150	1046	972	989
Zinc	ppm ASTM D5185m 1270	1265	1251	1230
Sulfur	ppm ASTM D5185m 2060	3428	2910	2857

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	4	4
Sodium	ppm ASTM D5185m	16	9	3
Potassium	ppm ASTM D5185m >20	8	5	11

INFRA-RED

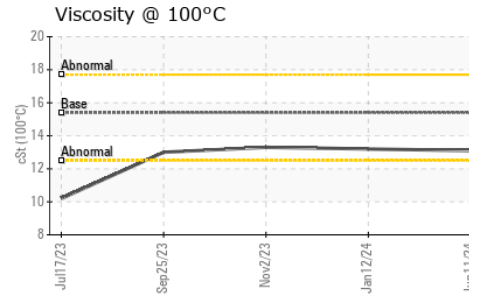
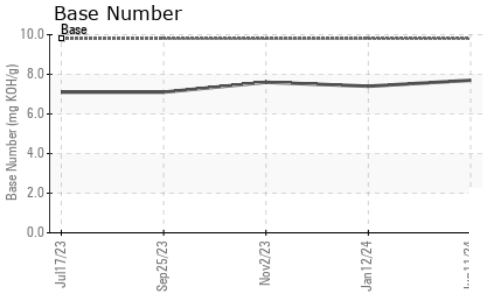
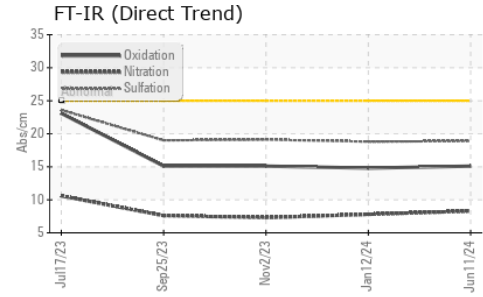
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.3	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	8.3	7.8	7.3
Sulfation	Abs/.1mm *ASTM D7415 >30	18.9	18.8	19.1

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.1	14.8	15.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.7	7.4	7.6



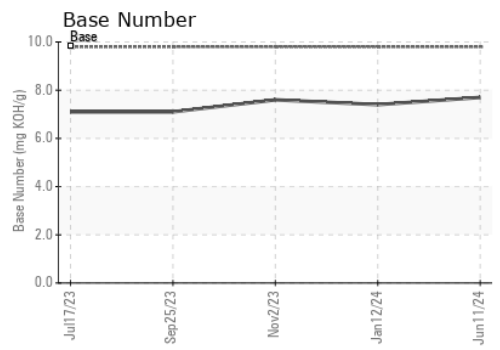
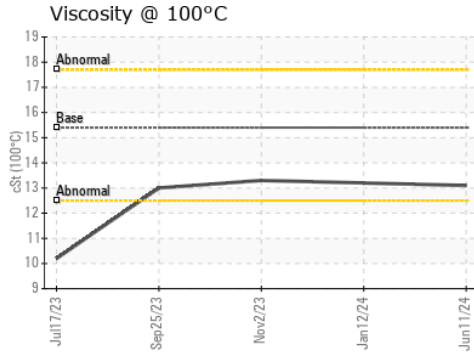
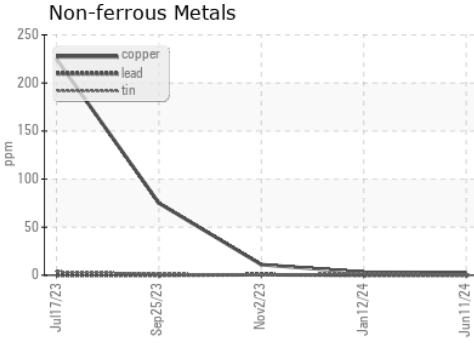
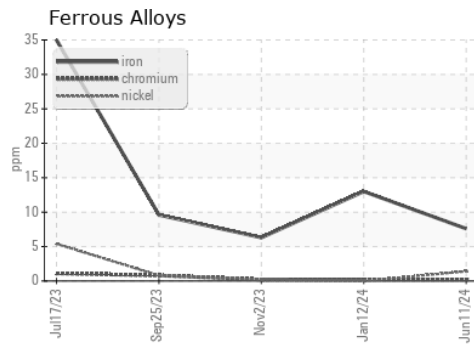
OIL ANALYSIS REPORT



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	13.1	13.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104064 **Received** : 19 Jun 2024
Lab Number : 06214422 **Tested** : 20 Jun 2024
Unique Number : 11087286 **Diagnosed** : 20 Jun 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 028 - Weldon
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 Halifax, NC
 US 27839
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 T: (252)532-3344
 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)