

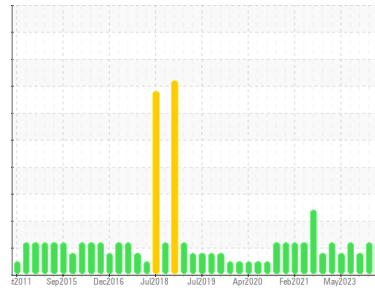


OIL ANALYSIS REPORT



Area
(MB7753)
Machine Id
2410
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (42 QTS)

Sample Rating Trend



FUEL



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0090136	GFL0090129	GFL0075167
Sample Date	Client Info	16 Apr 2024	25 Jan 2024	19 Sep 2023
Machine Age	hrs	8321	7701	6972
Oil Age	hrs	8321	7701	6972
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

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 >90	6	8	8
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >2	<1	<1	<1
Titanium	ppm ASTM D5185m >2	<1	<1	0
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	5	4	3
Lead	ppm ASTM D5185m >40	<1	<1	<1
Copper	ppm ASTM D5185m >330	2	1	1
Tin	ppm ASTM D5185m >15	<1	1	<1
Vanadium	ppm ASTM D5185m	<1	<1	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	1	<1	0
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	61	52	62
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	901	808	898
Calcium	ppm ASTM D5185m 1070	1051	939	1062
Phosphorus	ppm ASTM D5185m 1150	966	889	1012
Zinc	ppm ASTM D5185m 1270	1142	1043	1214
Sulfur	ppm ASTM D5185m 2060	2891	2301	3330

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	8	4
Sodium	ppm ASTM D5185m	4	4	2
Potassium	ppm ASTM D5185m >20	7	6	1
Fuel	% ASTM D3524 >3.0	▲ 4.7	▲ 5.4	▲ 5.2

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.2	0.4	1
Nitration	Abs/cm *ASTM D7624 >20	8.6	9.1	7.9
Sulfation	Abs/.1mm *ASTM D7415 >30	18.5	19.4	18.9

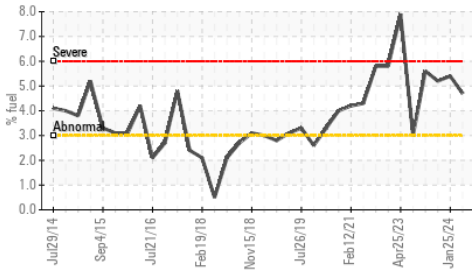
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.2	15.9	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	6.9	6.2	8.0

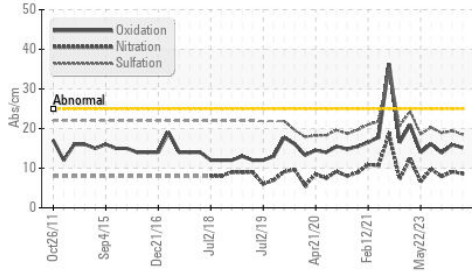


OIL ANALYSIS REPORT

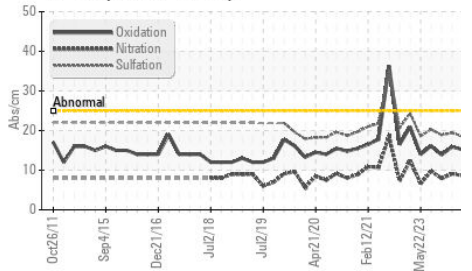
▲ Fuel Dilution



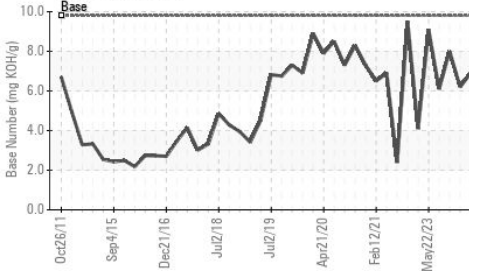
● FT-IR (Direct Trend)



● FT-IR (Direct Trend)



● Base Number

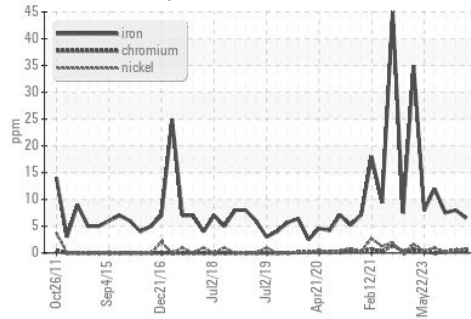


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

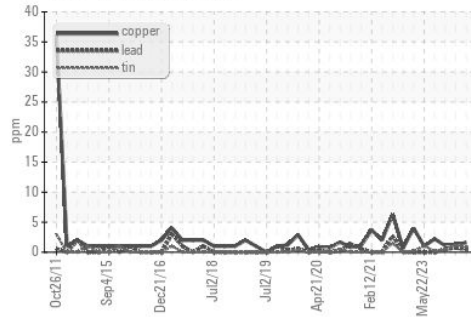
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.1	▲ 11.9

GRAPHS

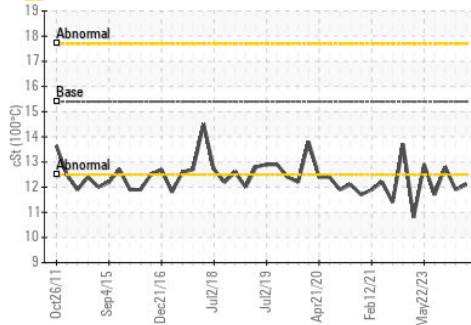
● Ferrous Alloys



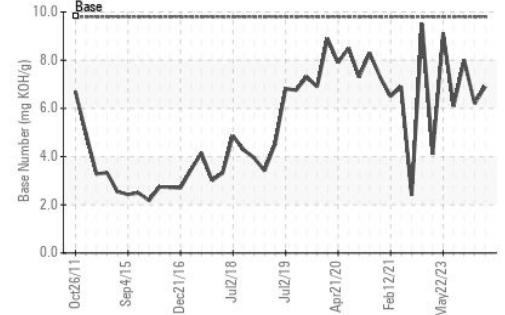
● Non-ferrous Metals



▲ Viscosity @ 100°C



● Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0090136

Lab Number : 06155057

Unique Number : 10990480

Test Package : FLEET (Additional Tests: PercentFuel)

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)

Received : 19 Apr 2024

Tested : 23 Apr 2024

Diagnosed : 23 Apr 2024 - Wes Davis

GFL Environmental - 044 - Elizabeth City

657 Old US 17

Elizabeth City, NC

US 27909

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