

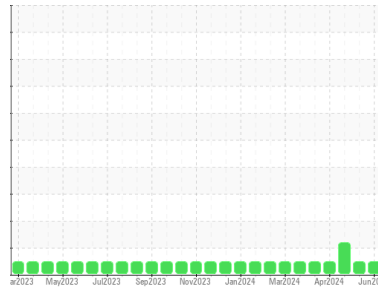


OIL ANALYSIS REPORT



Area
(GCL865)
 Machine Id
413017
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

Sample Rating Trend



NORMAL



DIAGNOSIS

- Recommendation**
Resample at the next service interval to monitor.
- Wear**
All component wear rates are normal.
- Contamination**
Insufficient sample was received to conduct all the routine laboratory tests. There is no indication of any contamination in the oil.
- Fluid Condition**
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0111433	GFL0111417	GFL0111415
Sample Date	Client Info	28 Jun 2024	05 Jun 2024	20 May 2024
Machine Age	hrs	3590	3301	3208
Oil Age	hrs	382	93	595
Oil Changed	Client Info	Not Chngd	Not Chngd	Changed
Sample Status		NORMAL	NORMAL	ATTENTION

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	6	4	21
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >5	<1	<1	3
Titanium	ppm ASTM D5185m >2	0	<1	0
Silver	ppm ASTM D5185m >2	0	0	<1
Aluminum	ppm ASTM D5185m >20	2	2	2
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	<1	<1	1
Tin	ppm ASTM D5185m >15	<1	<1	<1
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	3	2	8
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	57	57	66
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	907	880	1029
Calcium	ppm ASTM D5185m 1070	1014	988	1148
Phosphorus	ppm ASTM D5185m 1150	985	905	1092
Zinc	ppm ASTM D5185m 1270	1198	1124	1358
Sulfur	ppm ASTM D5185m 2060	2717	3093	3593

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	4	9
Sodium	ppm ASTM D5185m	3	1	116
Potassium	ppm ASTM D5185m >20	3	3	6

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	---	0.1	0.3
Nitration	Abs/cm *ASTM D7624 >20	---	5.9	8.5
Sulfation	Abs/.1mm *ASTM D7415 >30	---	17.8	19.5

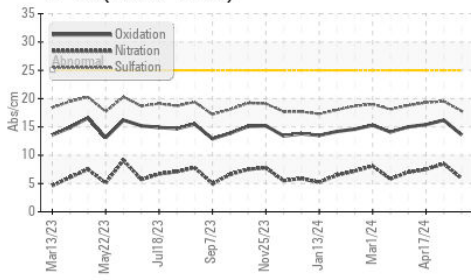
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	---	13.6	16.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	---	8.3	6.9

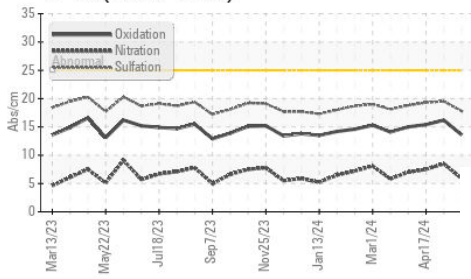


OIL ANALYSIS REPORT

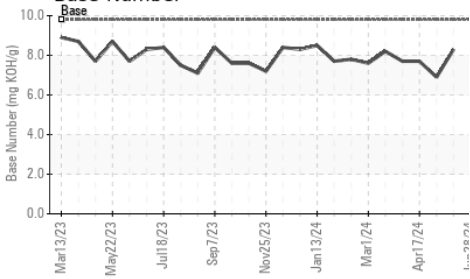
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Base Number

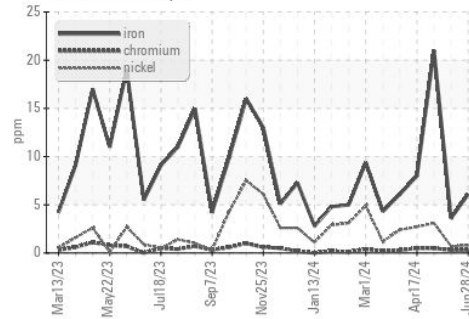


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

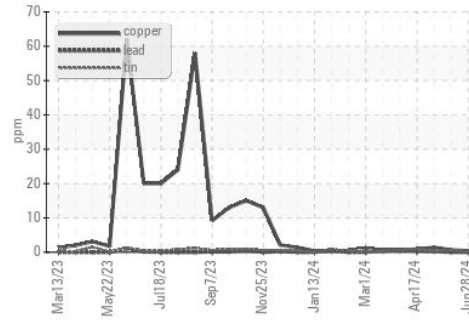
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.3

GRAPHS

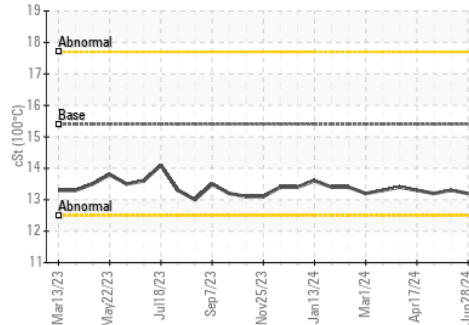
Ferrous Alloys



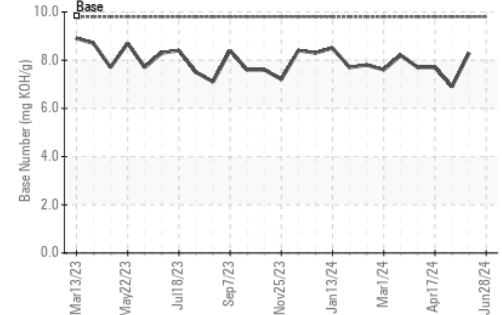
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0111433
 Lab Number : 06227080
 Unique Number : 11110573
 Test Package : FLEET

GFL Environmental - 073 - Warner Robins - Transwaste
 155 Story Road
 Warner Robins, GA
 US 31093
 Contact: JOSH MALONEY
 jmaloney@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)

T:
F: