



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
413108
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON UHP 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117187	GFL0114046	GFL0109833
Sample Date		Client Info		19 Apr 2024	21 Mar 2024	07 Feb 2024
Machine Age	hrs	Client Info		4081	3917	3625
Oil Age	hrs	Client Info		0	0	600
Filter Age	hrs	Client Info		0	0	600
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	21	5	16
Chromium	ppm	ASTM D5185m	>5	<1	0	1
Nickel	ppm	ASTM D5185m	>2	0	0	▲ 7
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	1	6
Lead	ppm	ASTM D5185m	>30	0	0	<1
Copper	ppm	ASTM D5185m	>150	4	5	16
Tin	ppm	ASTM D5185m	>5	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

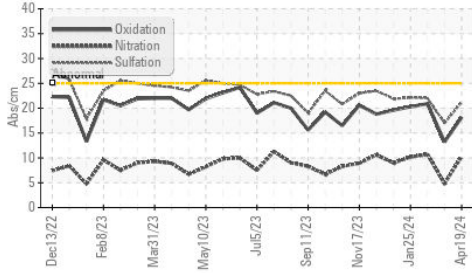
Silicon	ppm	ASTM D5185m	>20	6	4	5
Potassium	ppm	ASTM D5185m	>20	0	0	10
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.3	4.8	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	17.0	22.0
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

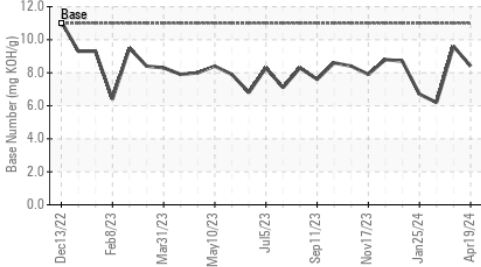
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	1	0
Boron	ppm	ASTM D5185m	0	4	7	42
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	64	60	59	19
Manganese	ppm	ASTM D5185m	0	<1	0	2
Magnesium	ppm	ASTM D5185m	1160	898	960	877
Calcium	ppm	ASTM D5185m	820	1075	1185	1286
Phosphorus	ppm	ASTM D5185m	1160	999	1090	766
Zinc	ppm	ASTM D5185m	1260	1210	1276	937
Sulfur	ppm	ASTM D5185m	3000	3265	3866	2464
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	13.2	20.9
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	8.4	9.6	6.2
Visc @ 100°C	cSt	ASTM D445	11.9	13.2	● 14.2	11.6

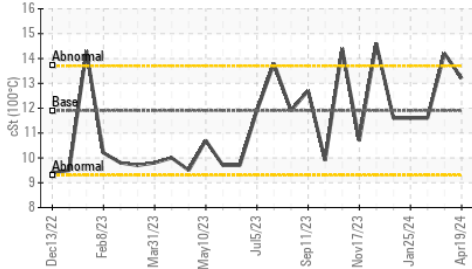
FT-IR (Direct Trend)



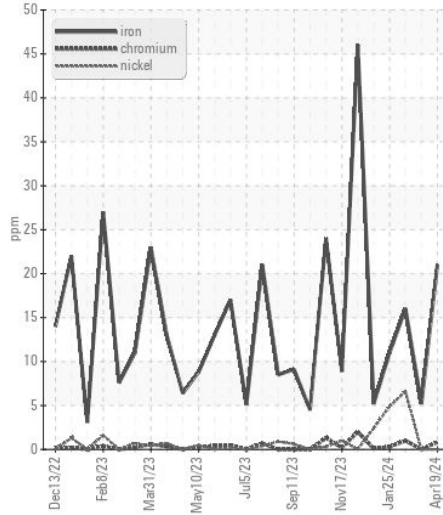
Base Number



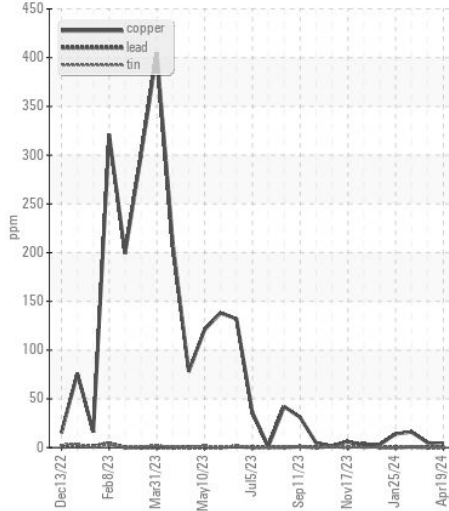
Viscosity @ 100°C



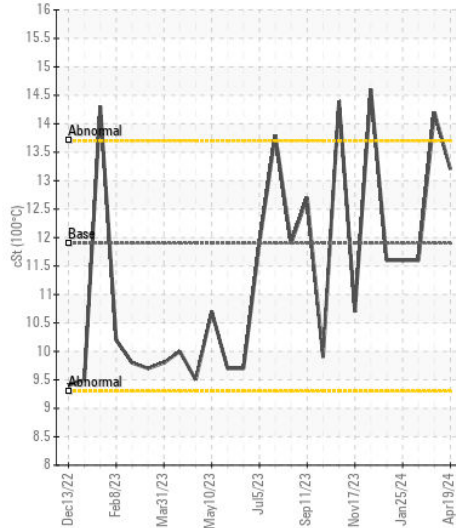
Ferrous Alloys



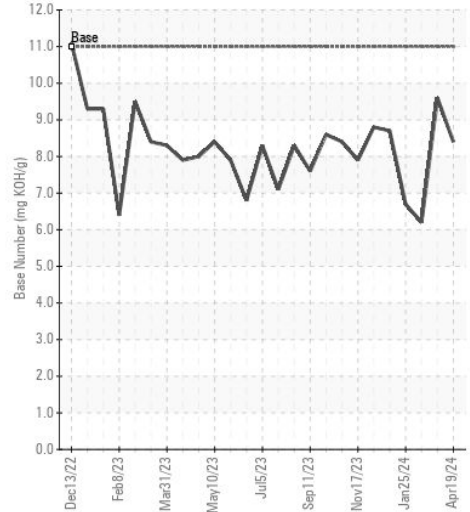
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117187
Lab Number : 06158361
Unique Number : 10993784
Test Package : FLEET

Received : 23 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Wes Davis

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@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)

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F: