



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(83J 44U)
Machine Id
913147
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0108060	GFL0108129	GFL0102438
Sample Date		Client Info		22 Feb 2024	22 Jan 2024	04 Jan 2024
Machine Age	hrs	Client Info		2908	2780	83860
Oil Age	hrs	Client Info		1051	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Valve wear is indicated.

Iron	ppm	ASTM D5185m	>120	13	9	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	▲ 12	7	6
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	6	4	2
Tin	ppm	ASTM D5185m	>15	1	1	<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.

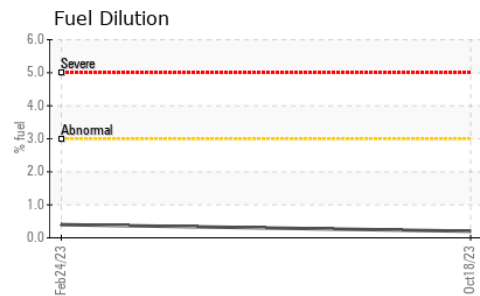
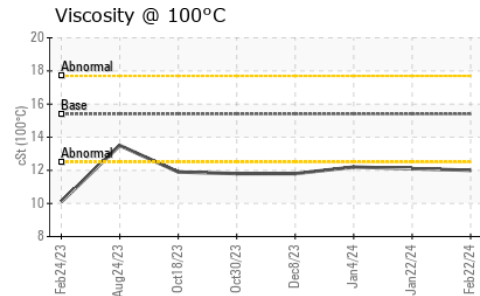
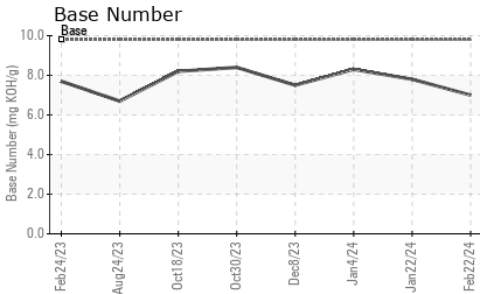
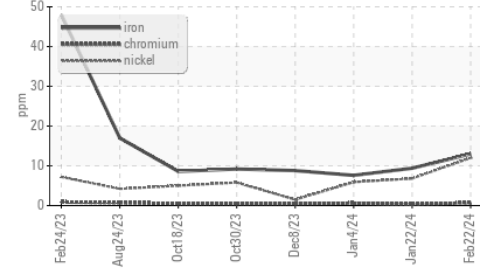
Silicon	ppm	ASTM D5185m	>25	8	8	5
Potassium	ppm	ASTM D5185m	>20	3	2	3
Fuel	%	ASTM D3524	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.4	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.6	8.8	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	19.8	19.6
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

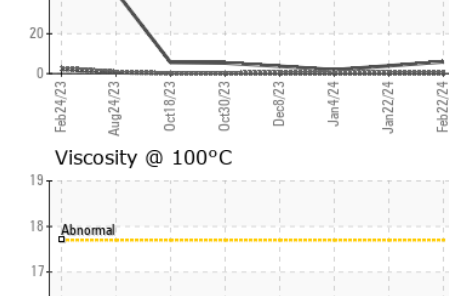
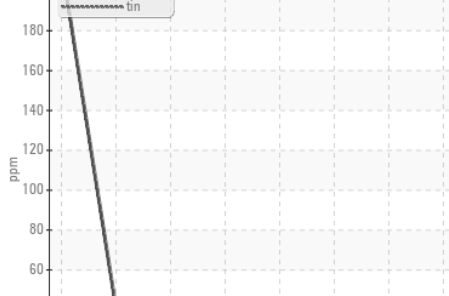
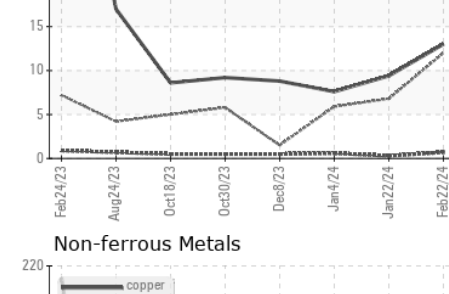
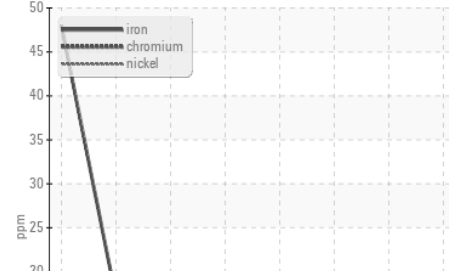
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		8	7	4
Boron	ppm	ASTM D5185m	0	23	23	26
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	64	56	53
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1136	996	1001
Calcium	ppm	ASTM D5185m	1070	932	821	812
Phosphorus	ppm	ASTM D5185m	1150	1135	1002	1018
Zinc	ppm	ASTM D5185m	1270	1360	1153	1157
Sulfur	ppm	ASTM D5185m	2060	3346	3001	3380
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	17.2	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.0	7.8	8.3
Visc @ 100°C	cSt	ASTM D445	15.4	12.0	12.1	12.2

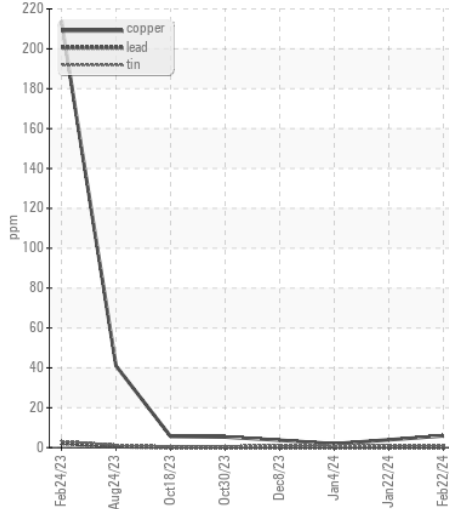
▲ Ferrous Alloys



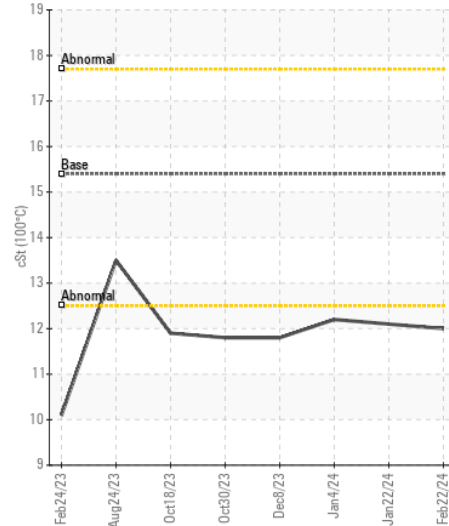
▲ Ferrous Alloys



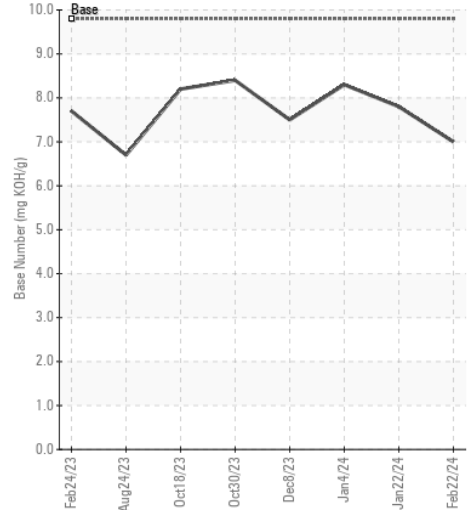
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108060 **Received** : 28 Feb 2024
Lab Number : 06103570 **Tested** : 04 Mar 2024
Unique Number : 10901800 **Diagnosed** : 04 Mar 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION, PercentFuel)

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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