



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
835M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON UHP 5W30 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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		GFL0104412	GFL0059152	GFL0059195
Sample Date		Client Info		18 Mar 2024	08 Nov 2023	01 Oct 2022
Machine Age	mls	Client Info		162045	157069	112473
Oil Age	mls	Client Info		0	0	112473
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	31	73	32
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>2	▲ 6	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	3	<1
Aluminum	ppm	ASTM D5185m	>25	2	5	2
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	3	6	5
Tin	ppm	ASTM D5185m	>15	2	0	0
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.

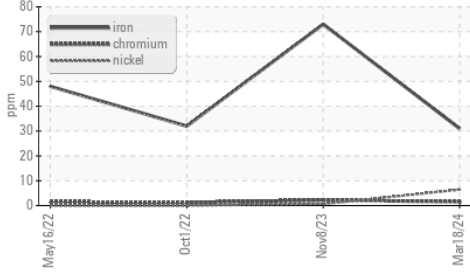
Silicon	ppm	ASTM D5185m	>25	6	14	6
Potassium	ppm	ASTM D5185m	>20	3	2	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	0.9	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.7	13.2	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	25.1	24.8
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

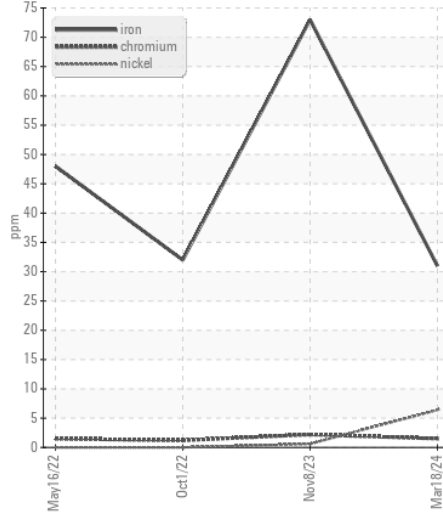
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		6	0	5
Boron	ppm	ASTM D5185m	0	2	0	1
Barium	ppm	ASTM D5185m	0	0	6	<1
Molybdenum	ppm	ASTM D5185m	64	57	69	55
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	1160	896	966	815
Calcium	ppm	ASTM D5185m	820	1067	1208	1034
Phosphorus	ppm	ASTM D5185m	1160	973	1078	934
Zinc	ppm	ASTM D5185m	1260	1231	1293	1150
Sulfur	ppm	ASTM D5185m	3000	2613	2897	2552
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.0	25.9	23.9
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	4.7	5.9	5.9
Visc @ 100°C	cSt	ASTM D445	11.9	13.6	14.4	13.4

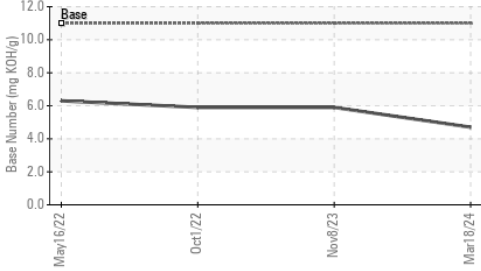
▲ Ferrous Alloys



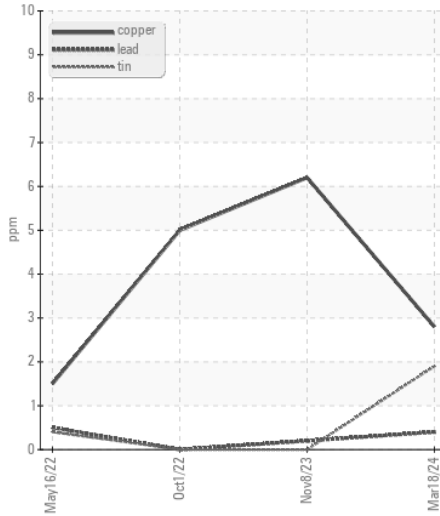
▲ Ferrous Alloys



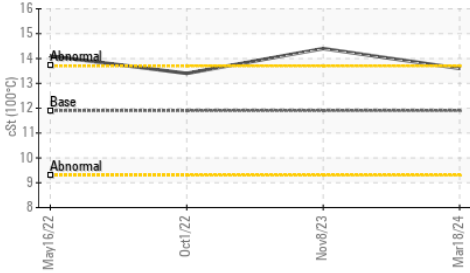
Base Number



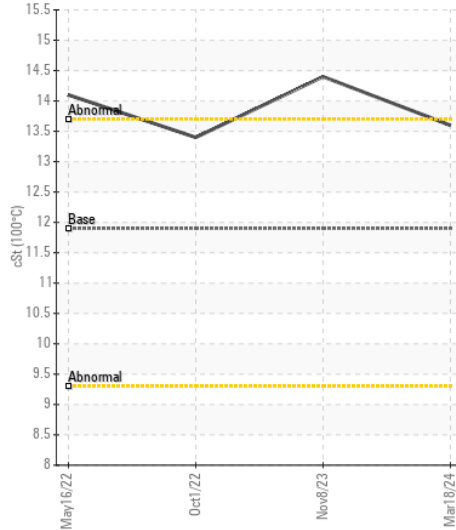
Non-ferrous Metals



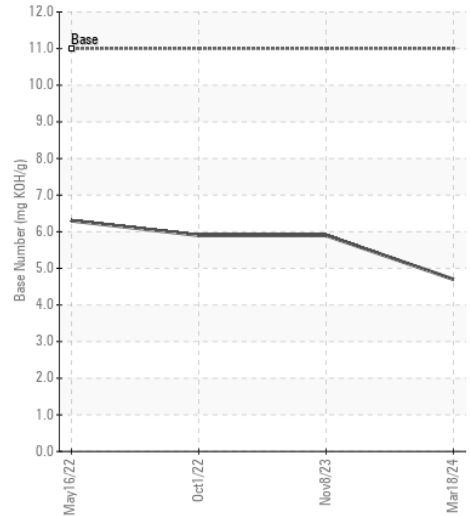
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104412 **Received** : 19 Mar 2024
Lab Number : 06122145 **Tested** : 20 Mar 2024
Unique Number : 10936296 **Diagnosed** : 21 Mar 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184

Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340

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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