



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL



Area
(61AC7A0)
Machine Id
2414
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

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		GFL0115822	GFL0115818	GFL0113685
Sample Date		Client Info		05 Apr 2024	08 Mar 2024	19 Feb 2024
Machine Age	hrs	Client Info		20998	20857	20734
Oil Age	hrs	Client Info		1518	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	MARGINAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	11	10
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	3	4	2
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	8	9	5
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	2	3	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	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.

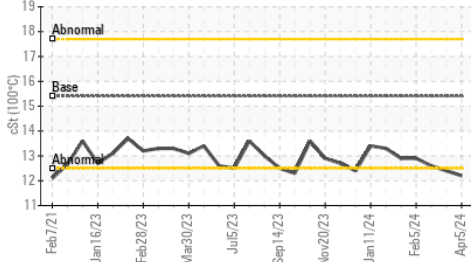
Silicon	ppm	ASTM D5185m	>25	4	7	4
Potassium	ppm	ASTM D5185m	>20	17	3	<1
Fuel	%	ASTM D3524	>6.0	<1.0	▲ 3.7	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.5	8.4	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	18.3	18.1
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

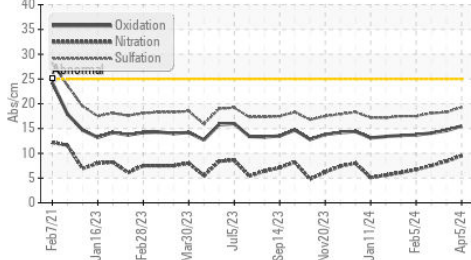
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		5	3	2
Boron	ppm	ASTM D5185m	0	<1	4	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	59	84	59
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	817	1110	875
Calcium	ppm	ASTM D5185m	1070	1012	1285	1066
Phosphorus	ppm	ASTM D5185m	1150	910	1167	990
Zinc	ppm	ASTM D5185m	1270	1104	1456	1134
Sulfur	ppm	ASTM D5185m	2060	3148	3681	2928
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	14.6	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.2	7.9	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.2	▲ 12.4	12.6

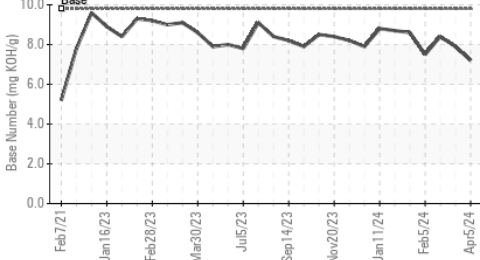
▲ Viscosity @ 100°C



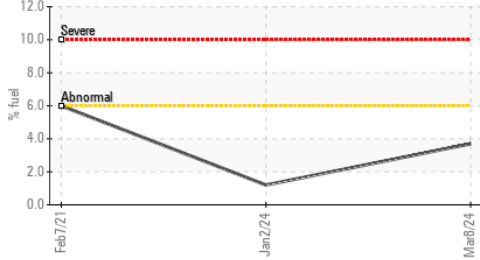
FT-IR (Direct Trend)



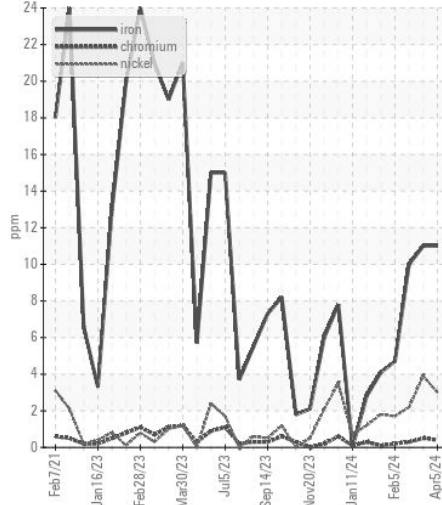
Base Number



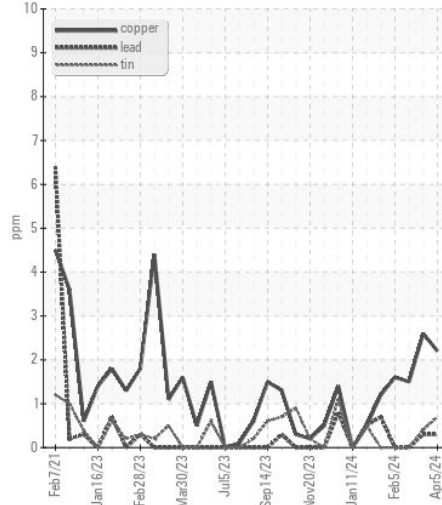
Fuel Dilution



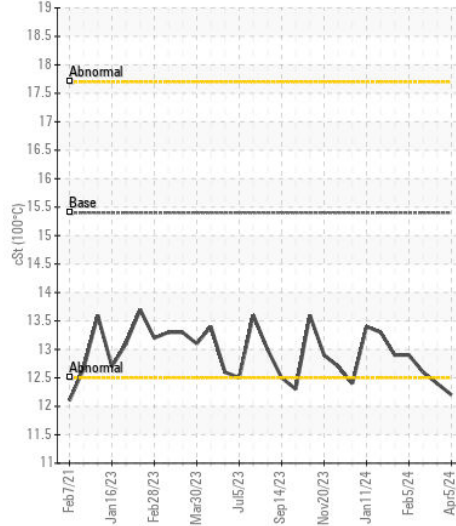
Ferrous Alloys



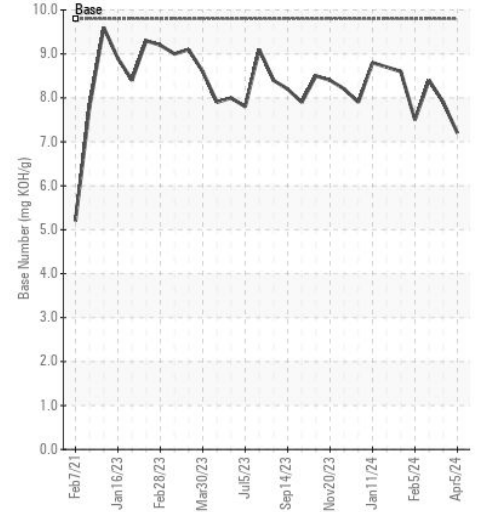
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115822 **Received** : 16 Apr 2024
Lab Number : 06150998 **Tested** : 19 Apr 2024
Unique Number : 10981076 **Diagnosed** : 19 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION)

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)
 13737 Plant Rd
 Childersburg, AL
 US 35044
 Contact: JONATHAN WILLIAMS
 jonathan.williams@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: