



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

GFL035

Machine Id

3747

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (38 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0116418	GFL0085162	GFL0071570
Sample Date		Client Info		12 Apr 2024	02 Nov 2023	15 Aug 2023
Machine Age	hrs	Client Info		0	10027	10027
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		0	600	600
Oil Changed		Client Info		Not Changd	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	9	9	8
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	2
Lead	ppm	ASTM D5185m	>150	0	<1	0
Copper	ppm	ASTM D5185m	>90	1	1	10
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
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.

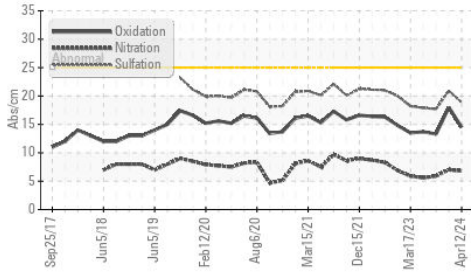
Silicon	ppm	ASTM D5185m	>35	9	▲ 47	6
Potassium	ppm	ASTM D5185m	>20	0	2	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	0.2	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.8	7.0	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	20.9	17.7
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

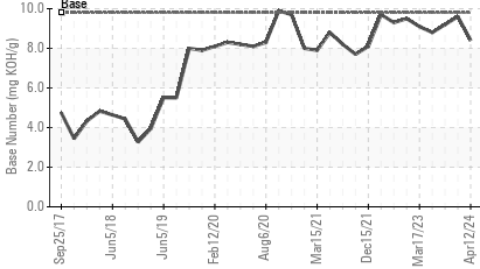
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	<1	4
Boron	ppm	ASTM D5185m	0	5	38	7
Barium	ppm	ASTM D5185m	0	0	5	0
Molybdenum	ppm	ASTM D5185m	60	60	50	61
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	986	648	943
Calcium	ppm	ASTM D5185m	1070	1198	1412	1128
Phosphorus	ppm	ASTM D5185m	1150	1148	904	1027
Zinc	ppm	ASTM D5185m	1270	1340	1011	1235
Sulfur	ppm	ASTM D5185m	2060	3701	2955	3697
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	18.0	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.4	9.6	9.2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.5	13.9

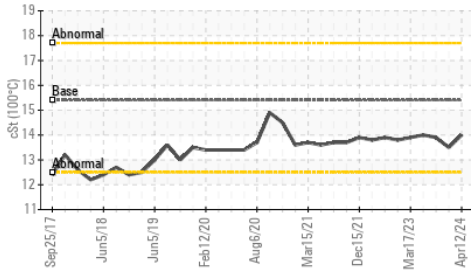
FT-IR (Direct Trend)



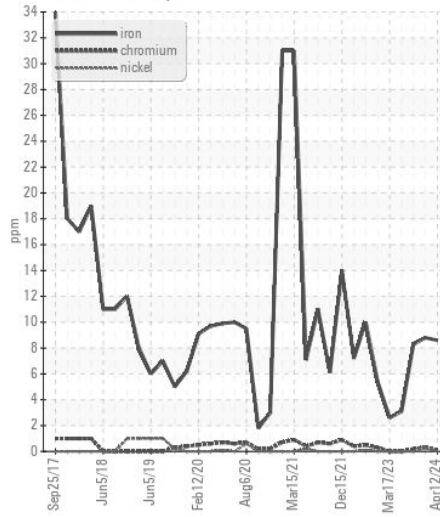
Base Number



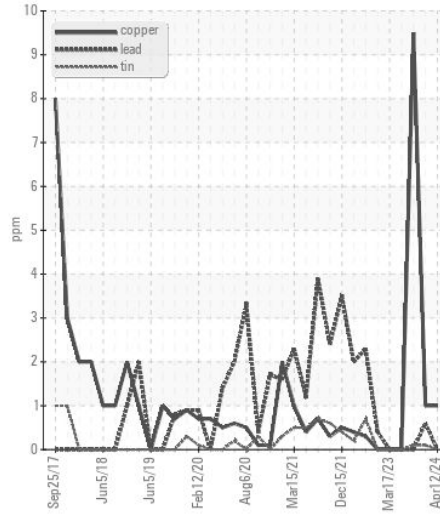
Viscosity @ 100°C



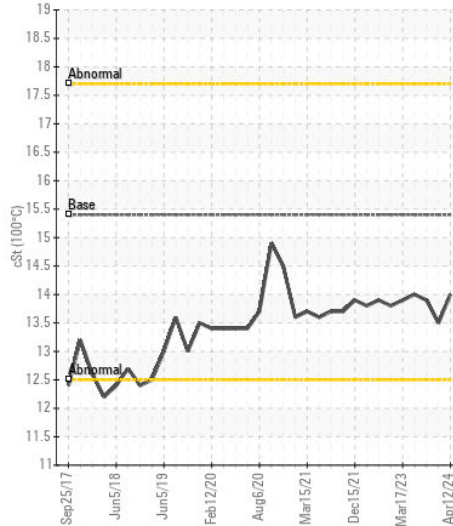
Ferrous Alloys



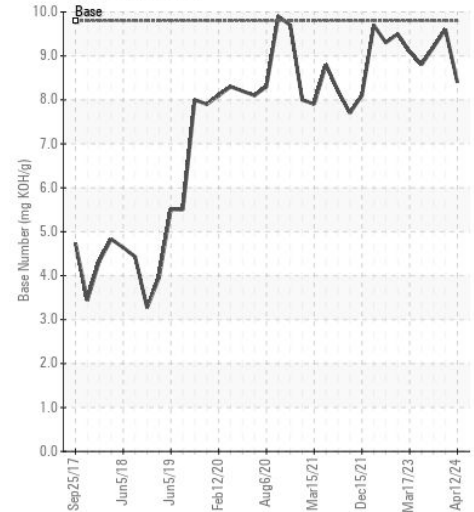
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116418
Lab Number : 06150029
Unique Number : 10980107
Test Package : FLEET

Received : 16 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 2024 - Wes Davis

GFL Environmental - 035 - Greensboro
 1236 Elon Place
 High Point, NC
 US 27263
 Contact: JORGE COSTA
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 T: (336)668-3712
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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)