



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
(EHS996)
Machine Id
11256
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0077444	GFL0089560	GFL0083069
Sample Date		Client Info		21 May 2024	20 Mar 2024	02 Nov 2023
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The aluminum level is abnormal.

Iron	ppm	ASTM D5185m	>100	50	17	3
Chromium	ppm	ASTM D5185m	>20	4	1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 29	4	1
Lead	ppm	ASTM D5185m	>40	<1	2	0
Copper	ppm	ASTM D5185m	>330	8	2	0
Tin	ppm	ASTM D5185m	>15	1	1	0
Vanadium	ppm	ASTM D5185m		0	<1	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.

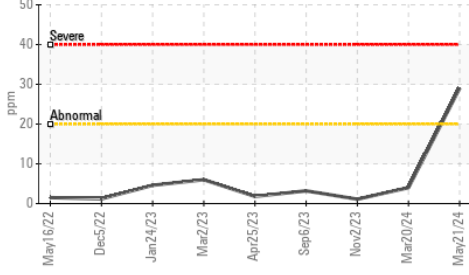
Silicon	ppm	ASTM D5185m	>25	7	8	3
Potassium	ppm	ASTM D5185m	>20	19	1	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	1.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	11.4	9.0	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	20.9	18.0
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

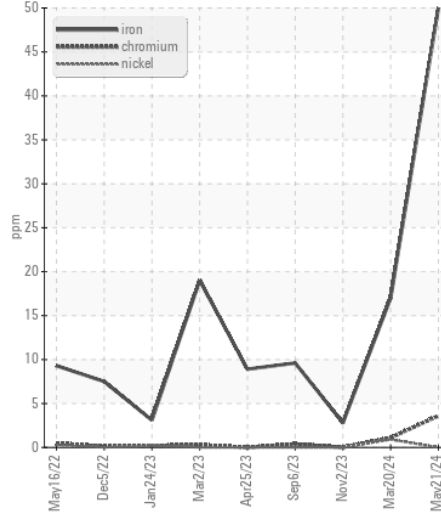
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		6	2	3
Boron	ppm	ASTM D5185m	0	3	9	11
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	60	62	87	63
Manganese	ppm	ASTM D5185m	0	1	<1	0
Magnesium	ppm	ASTM D5185m	1010	906	1227	884
Calcium	ppm	ASTM D5185m	1070	1034	1340	979
Phosphorus	ppm	ASTM D5185m	1150	974	1385	920
Zinc	ppm	ASTM D5185m	1270	1207	1564	1187
Sulfur	ppm	ASTM D5185m	2060	2728	4056	2971
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.9	15.0	13.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.1	9.6	9.5
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	14.3	14.0

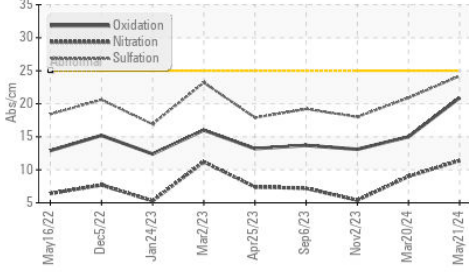
▲ Aluminum (ppm)



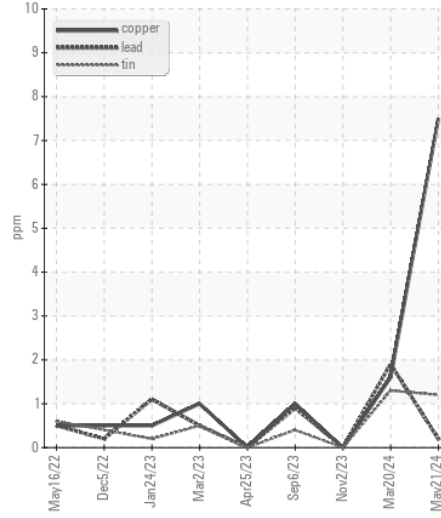
Ferrous Alloys



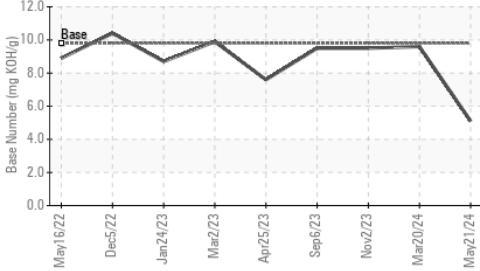
FT-IR (Direct Trend)



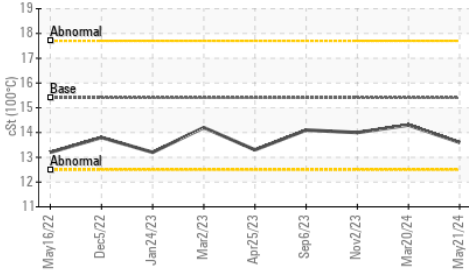
Non-ferrous Metals



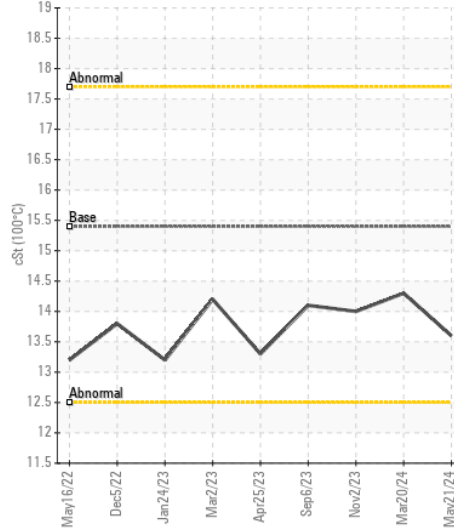
Base Number



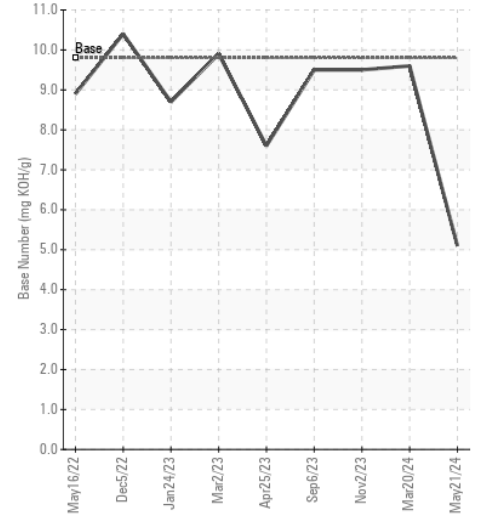
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0077444
Lab Number : 06193772
Unique Number : 11055895
Test Package : FLEET

Received : 29 May 2024
Tested : 30 May 2024
Diagnosed : 31 May 2024 - Angela Borella

GFL Environmental - 072 - Americus - Transwaste
 361 McMath Mill Road
 Americus, GA
 US 31719

Contact: RICHARD HEINZERLING
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T: (229)924-3669

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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