



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
427186 - SW4728
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: Engine)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0123558	GFL0094128	GFL0089399
Sample Date		Client Info		22 May 2024	16 Nov 2023	05 Sep 2023
Machine Age	mls	Client Info		346360	327650	318333
Oil Age	mls	Client Info		346360	327650	318333
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	7	6
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	3	1	3
Copper	ppm	ASTM D5185m	>330	2	<1	1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
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.

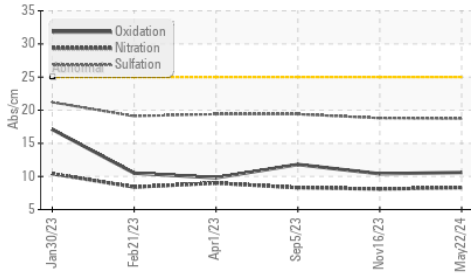
Silicon	ppm	ASTM D5185m	>25	16	6	8
Potassium	ppm	ASTM D5185m	>20	4	2	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.1	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	18.8	19.4
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

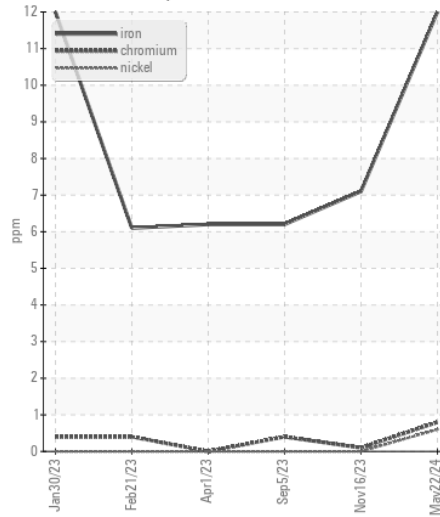
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	2	3
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	60	54	45	45
Manganese	ppm	ASTM D5185m	0	1	<1	1
Magnesium	ppm	ASTM D5185m	1010	29	10	11
Calcium	ppm	ASTM D5185m	1070	2544	2494	2637
Phosphorus	ppm	ASTM D5185m	1150	1106	1080	1173
Zinc	ppm	ASTM D5185m	1270	1309	1290	1428
Sulfur	ppm	ASTM D5185m	2060	3423	3140	4250
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.6	10.4	11.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	6.7	6.2
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	13.7	13.4

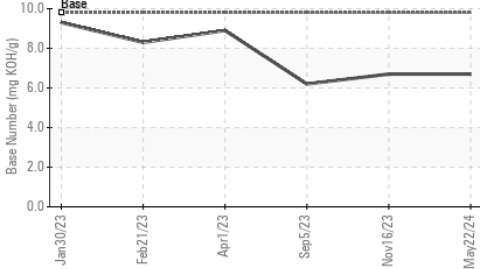
FT-IR (Direct Trend)



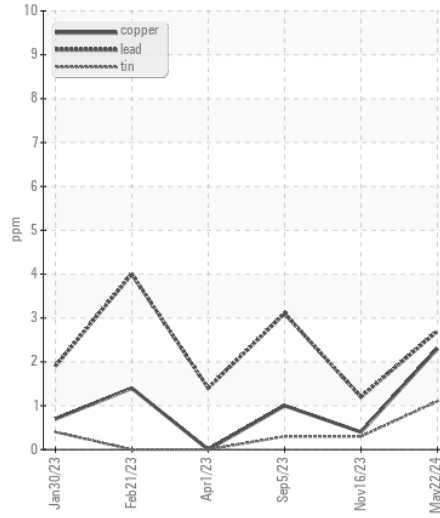
Ferrous Alloys



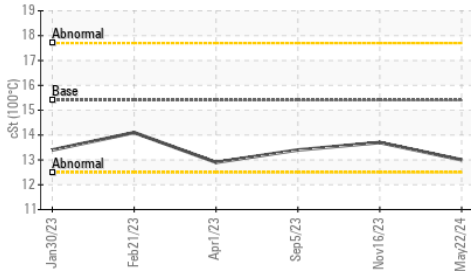
Base Number



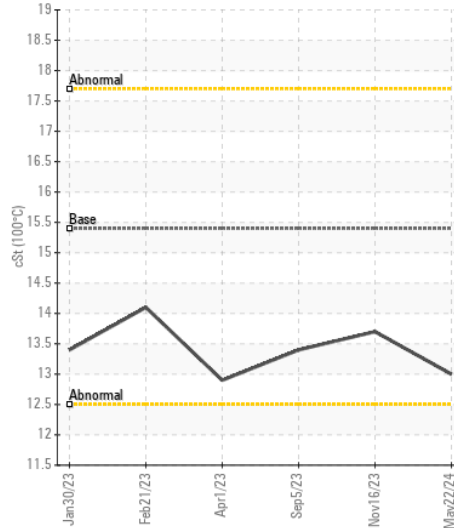
Non-ferrous Metals



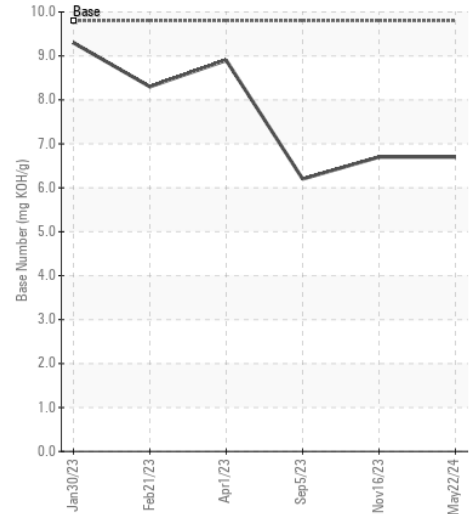
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0123558
Lab Number : 06191880
Unique Number : 11048632
Test Package : FLEET

Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 30 May 2024 - Sean Felton

GFL Environmental - 983 - Sugar Land Hauling
 16011 West Belfort Street
 Sugar Land, TX
 US 77498
 Contact: Adrian Martinez
 adrianmartinez@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: