



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

(DZ8297)

Machine Id

11106

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0123352	GFL0082409	GFL0050754
Sample Date		Client Info		16 Jul 2024	04 Jul 2023	06 Jan 2023
Machine Age	mls	Client Info		133290	133290	124154
Oil Age	mls	Client Info		133290	9136	8386
Filter Age	mls	Client Info		0	0	8386
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	36	44	35
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	4
Lead	ppm	ASTM D5185m	>40	2	5	4
Copper	ppm	ASTM D5185m	>330	6	4	3
Tin	ppm	ASTM D5185m	>15	<1	2	1
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.

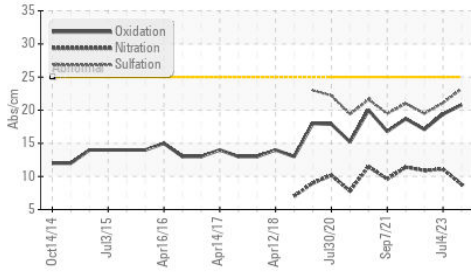
Silicon	ppm	ASTM D5185m	>25	10	8	6
Potassium	ppm	ASTM D5185m	>20	7	15	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	8.8	11.1	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	21.1	19.5
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

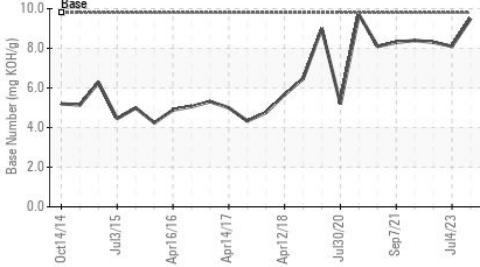
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	10	6
Boron	ppm	ASTM D5185m	0	41	2	8
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	60	44	62	61
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	647	991	949
Calcium	ppm	ASTM D5185m	1070	1564	1162	1115
Phosphorus	ppm	ASTM D5185m	1150	861	1061	1049
Zinc	ppm	ASTM D5185m	1270	1058	1304	1277
Sulfur	ppm	ASTM D5185m	2060	3201	3706	3641
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8	19.4	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.5	8.1	8.3
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.8	14.6

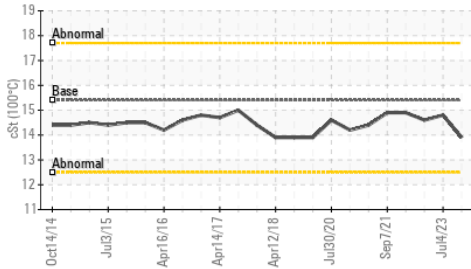
FT-IR (Direct Trend)



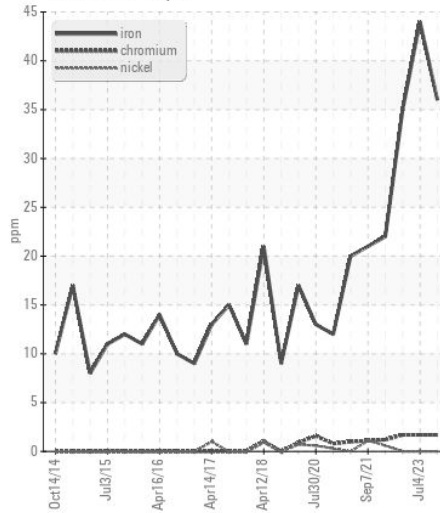
Base Number



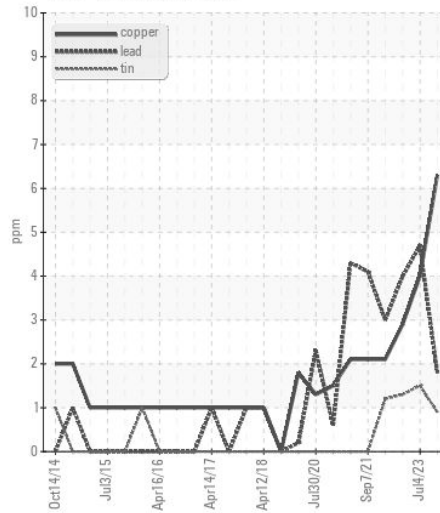
Viscosity @ 100°C



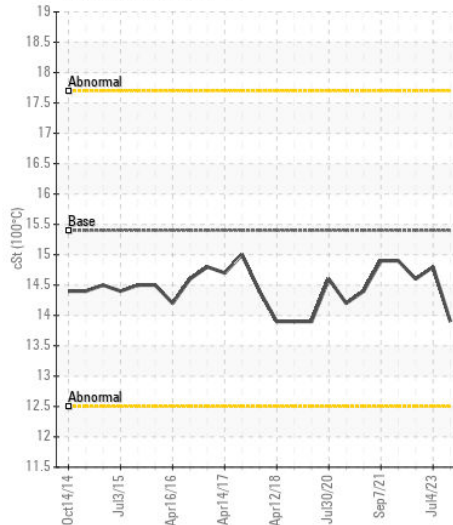
Ferrous Alloys



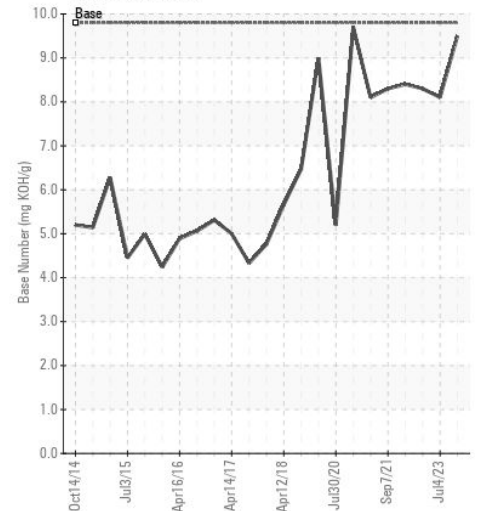
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0123352

Lab Number : 06240037

Unique Number : 11128871

Test Package : FLEET

Received : 18 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Sean Felton

GFL Environmental - 007 - Brunswick

2809 Galloway Road

Bolivia, NC

US 28422

Contact: DONALD CRAVEN

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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)