



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
(EEY356)
Machine Id
10651
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

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		GFL0109959	GFL0109865	GFL0101213
Sample Date		Client Info		08 Feb 2024	17 Jan 2024	20 Nov 2023
Machine Age	hrs	Client Info		21191	21065	20377
Oil Age	hrs	Client Info		555	429	502
Filter Age	hrs	Client Info		555	429	502
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ATTENTION	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	19	18	12
Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	3	2
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>100	<1	1	1
Tin	ppm	ASTM D5185m	>4	0	0	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.

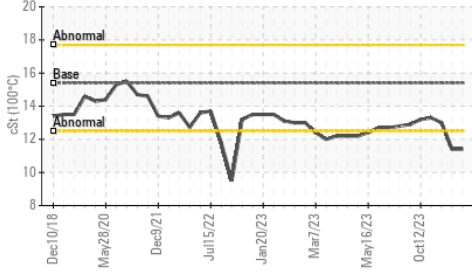
Silicon	ppm	ASTM D5185m	>25	6	6	6
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Fuel	%	ASTM D3524	>3.0	<1.0	▲ 2.4	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.6	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	20.1	19.9
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

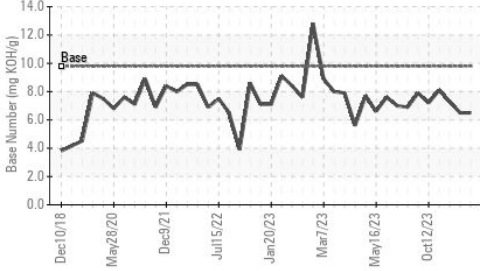
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		10	9	9
Boron	ppm	ASTM D5185m	0	12	4	7
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	56	58	60
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	801	907	893
Calcium	ppm	ASTM D5185m	1070	1017	1012	1042
Phosphorus	ppm	ASTM D5185m	1150	949	1001	1000
Zinc	ppm	ASTM D5185m	1270	1114	1214	1209
Sulfur	ppm	ASTM D5185m	2060	2560	2903	2849
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	17.6	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.5	6.5	7.3
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.4	▲ 11.4	13.0

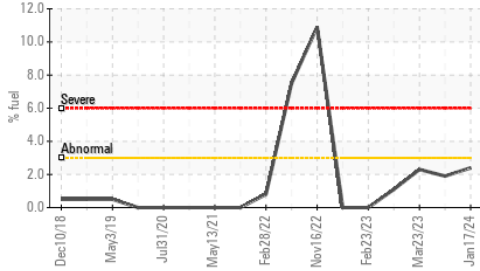
▲ Viscosity @ 100°C



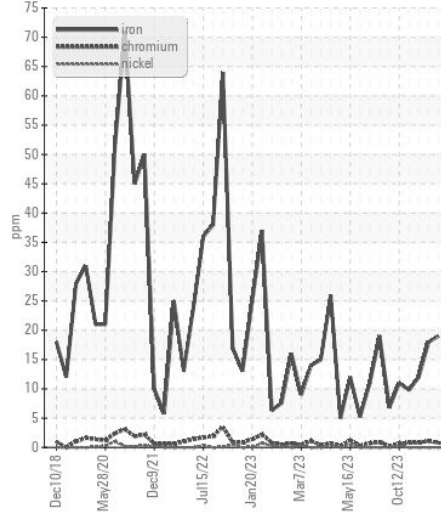
Base Number



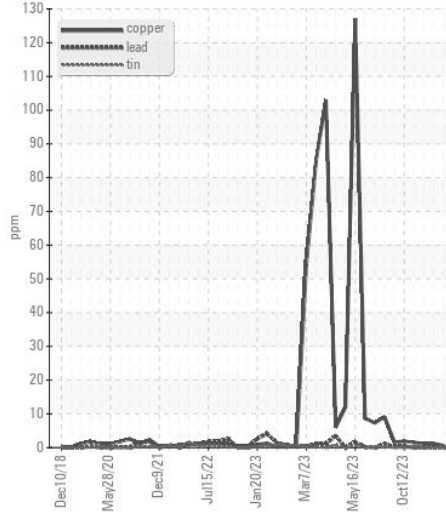
Fuel Dilution



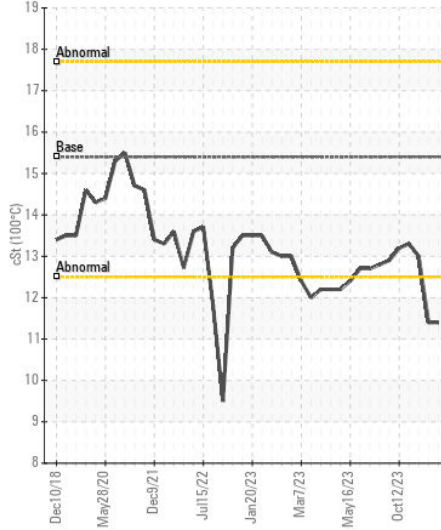
Ferrous Alloys



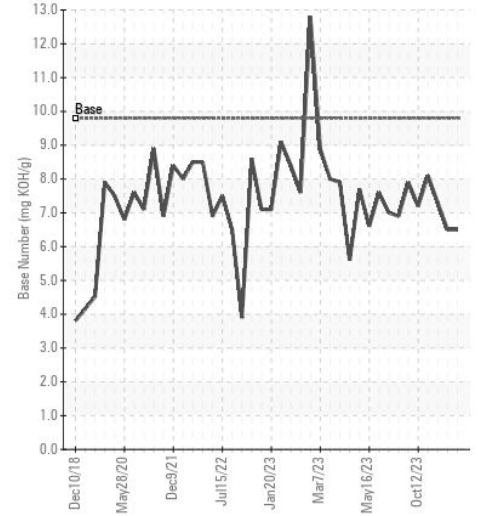
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109959 **Received** : 12 Feb 2024
Lab Number : 06085775 **Tested** : 13 Feb 2024
Unique Number : 10873220 **Diagnosed** : 13 Feb 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION)

GFL Environmental - 010 - Stockbridge
 1280 Rum Creek Parkway
 Stockbridge, GA
 US 30281
 Contact: JOSHUA TINKER
 joshuatinker@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)

T:
F: