



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
2828
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (11 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. 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		GFL0074620	GFL0092473	GFL0074607
Sample Date		Client Info		08 Jan 2024	17 Oct 2023	18 Jul 2023
Machine Age	hrs	Client Info		13460	13016	12317
Oil Age	hrs	Client Info		487	43	90
Filter Age	hrs	Client Info		487	43	90
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ATTENTION	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	9	2	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
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	2	1	<1
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	<1	0	0
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

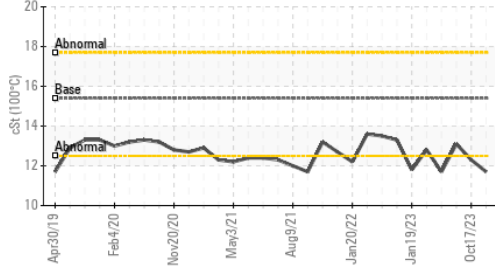
Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	2	2	0
Fuel	%	ASTM D3524	>5	0.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.4	4.8	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	15.9	17.6
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

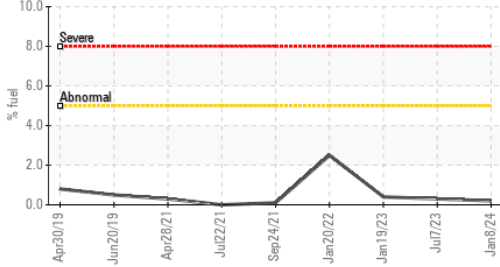
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		3	<1	4
Boron	ppm	ASTM D5185m	0	2	5	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	58	56	62
Manganese	ppm	ASTM D5185m	0	0	0	0
Magnesium	ppm	ASTM D5185m	1010	818	762	925
Calcium	ppm	ASTM D5185m	1070	959	902	1092
Phosphorus	ppm	ASTM D5185m	1150	922	831	1036
Zinc	ppm	ASTM D5185m	1270	1109	1057	1244
Sulfur	ppm	ASTM D5185m	2060	2811	2738	3710
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	11.0	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.6	6.8	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.7	▲ 12.3	13.1

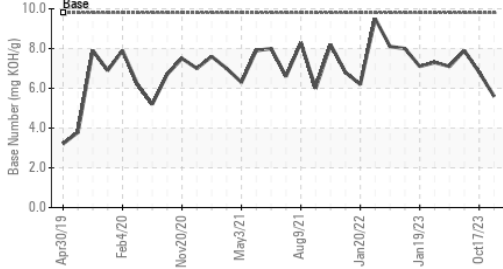
▲ Viscosity @ 100°C



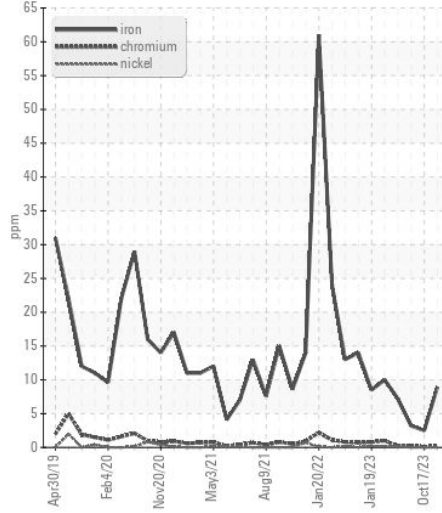
Fuel Dilution



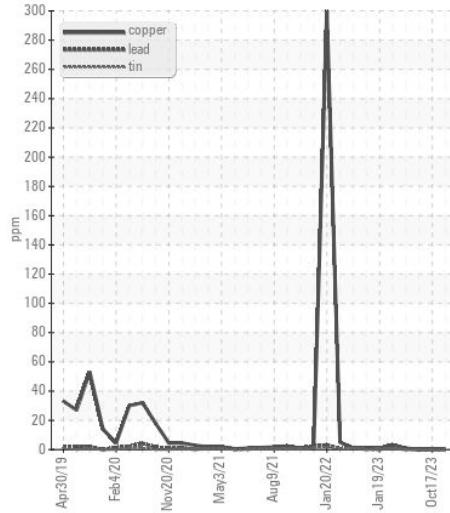
Base Number



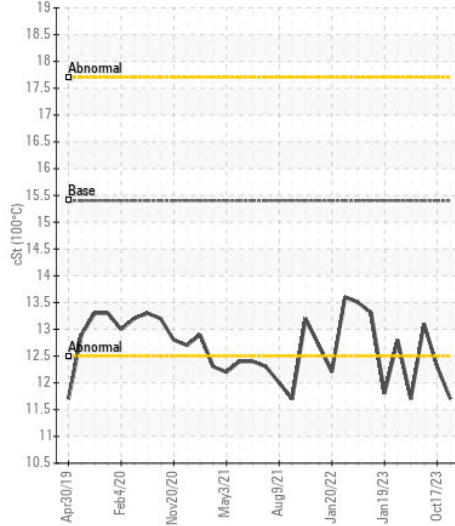
Ferrous Alloys



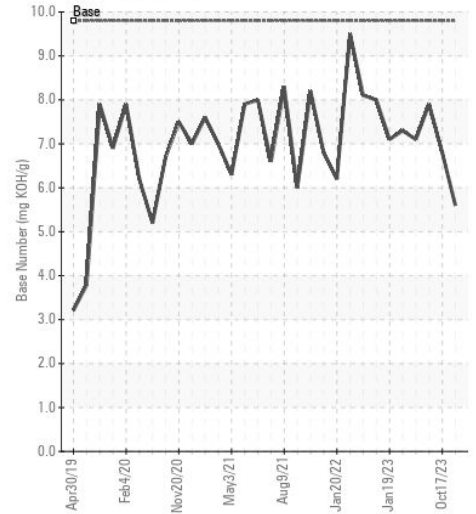
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0074620 **Received** : 10 Jan 2024
Lab Number : 06057288 **Diagnosed** : 14 Jan 2024
Unique Number : 10823237 **Diagnostician** : Don Baldridge
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 095 - Atlanta West
 2699 Cochran Industrial Blvd
 Douglasville, GA
 US 30127-1332
 Contact: Darrell Welch
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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)