



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL



Area
(P837499)
Machine Id
2623
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 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		GFL0096914	GFL0050891	GFL0069780
Sample Date		Client Info		08 Feb 2024	03 Oct 2023	24 Aug 2023
Machine Age	hrs	Client Info		14107	13542	13121
Oil Age	hrs	Client Info		565	13121	263
Filter Age	hrs	Client Info		0	13121	0
Oil Changed		Client Info		Not Chngd	Changed	Changed
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				MARGINAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	8	4	9
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	6	3
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	2	<1	1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
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.

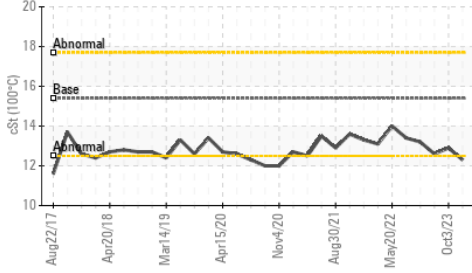
Silicon	ppm	ASTM D5185m	>25	6	4	5
Potassium	ppm	ASTM D5185m	>20	2	1	2
Fuel	%	ASTM D3524	>3.0	1.3	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.6	5.6	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	17.1	18.9
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

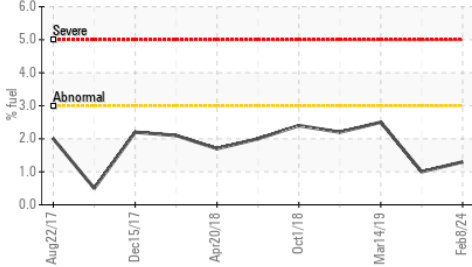
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		0	2	2
Boron	ppm	ASTM D5185m	0	11	15	6
Barium	ppm	ASTM D5185m	0	0	0	2
Molybdenum	ppm	ASTM D5185m	60	68	63	68
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	921	821	855
Calcium	ppm	ASTM D5185m	1070	1154	996	1160
Phosphorus	ppm	ASTM D5185m	1150	986	932	970
Zinc	ppm	ASTM D5185m	1270	1241	1105	1165
Sulfur	ppm	ASTM D5185m	2060	2982	3183	2957
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	13.1	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.9	7.9	6.4
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.3	12.9	12.6

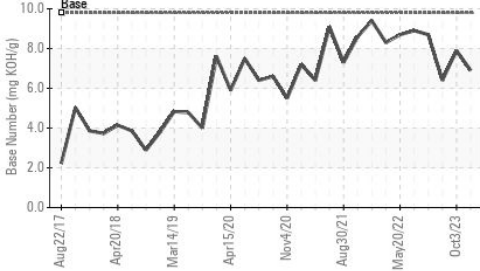
▲ Viscosity @ 100°C



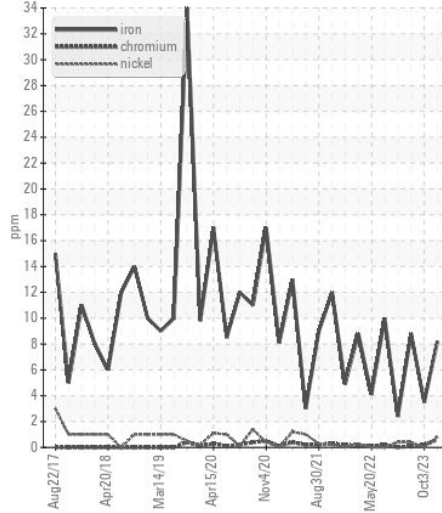
Fuel Dilution



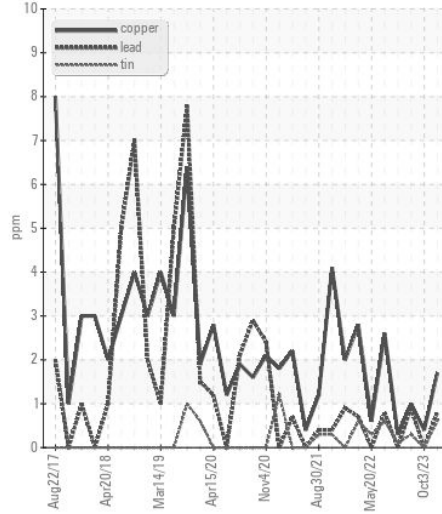
Base Number



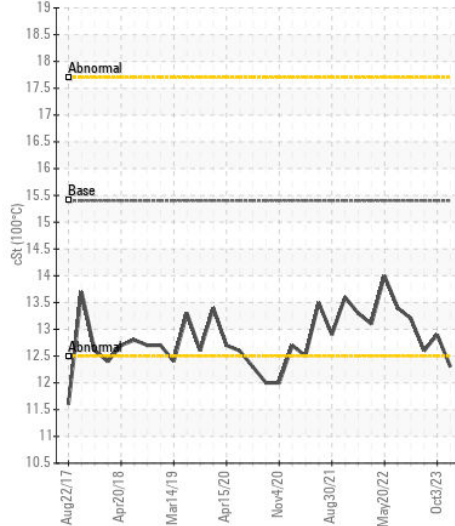
Ferrous Alloys



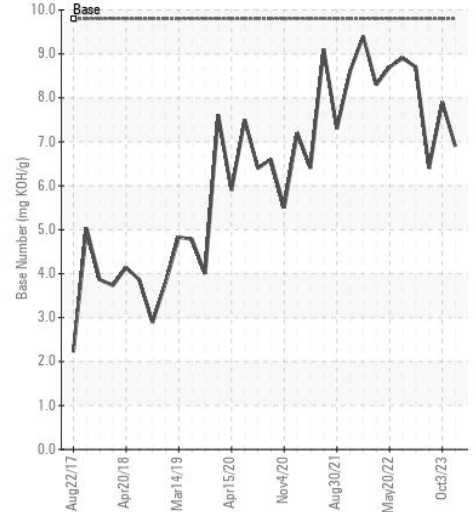
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0096914

Lab Number : 06085285

Unique Number : 10872730

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 09 Feb 2024

Tested : 13 Feb 2024

Diagnosed : 13 Feb 2024 - Jonathan Hester

GFL Environmental - 031 - Greenville/Spartanburg

1635 Antioch Church Rd

Piedmont, SC

US 29673

Contact: TECHNICIAN ACCOUNT

catherine.anastasio@wearcheck.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: