



Area
(TX106468)
Machine Id
10261
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0112133	GFL0052205	GFL0060120
Sample Date		Client Info		08 Feb 2024	04 Apr 2023	06 Dec 2022
Machine Age	hrs	Client Info		85103	85103	85103
Oil Age	hrs	Client Info		85103	0	23953
Filter Age	hrs	Client Info		0	600	1295
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	21	86	24
Chromium	ppm	ASTM D5185m	>20	1	5	1
Nickel	ppm	ASTM D5185m	>2	0	2	<1
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	7	10
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	2	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

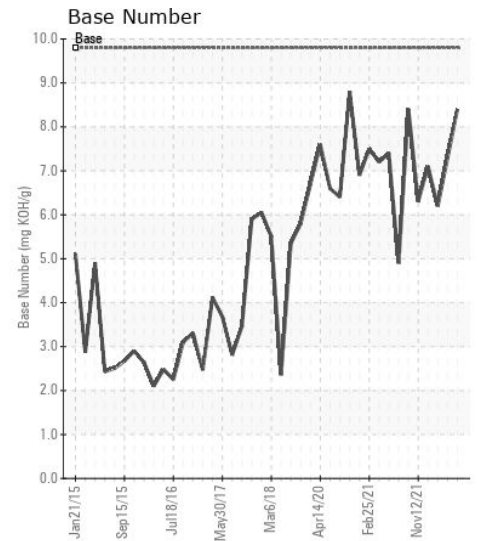
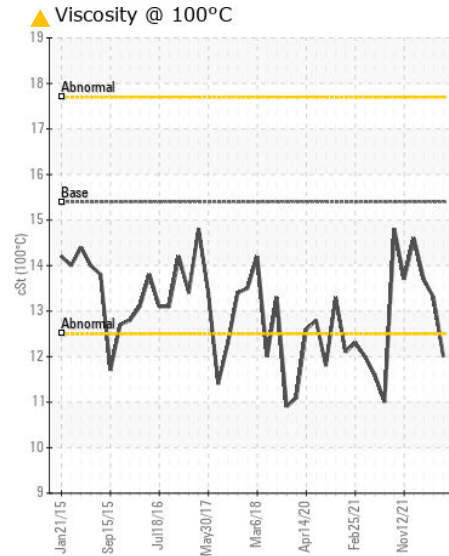
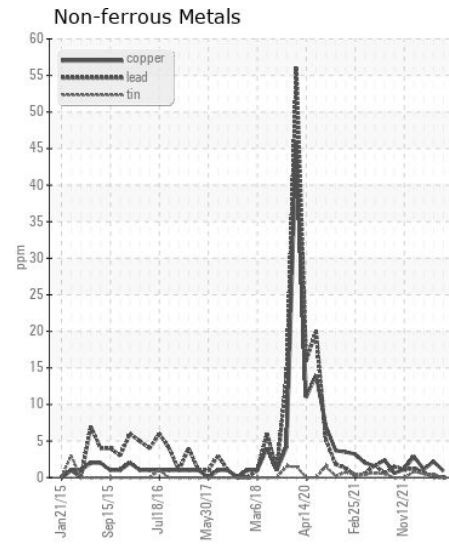
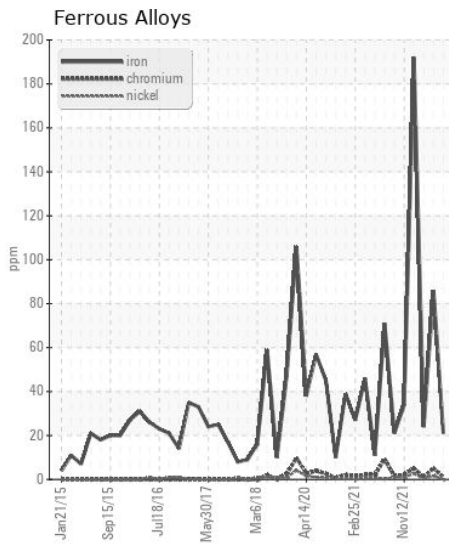
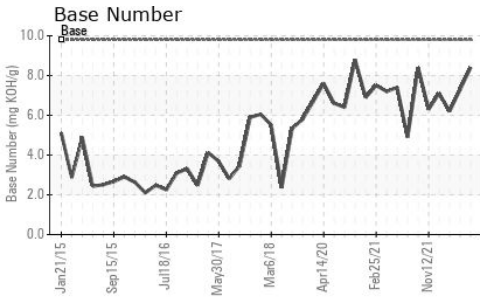
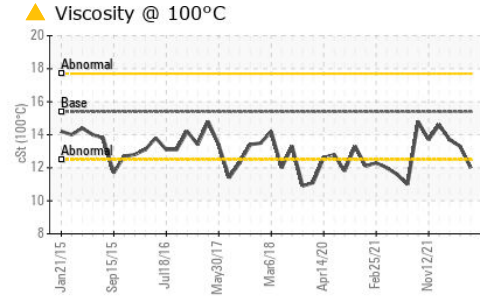
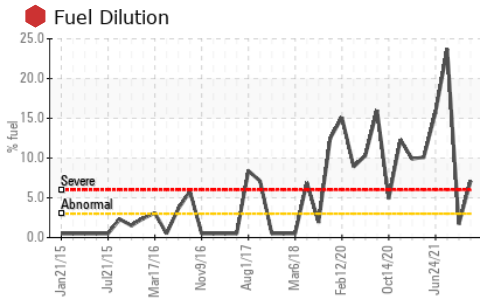
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	6	20	8
Potassium	ppm	ASTM D5185m	>20	0	3	15
Fuel	%	ASTM D3524	>3.0	7.1	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.3	1.4	2.1
Nitration	Abs/cm	*ASTM D7624	>20	8.4	14.2	18.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	26.1	32.4
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. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		5	15	0
Boron	ppm	ASTM D5185m	0	13	2	142
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	58	91	132
Manganese	ppm	ASTM D5185m	0	<1	1	<1
Magnesium	ppm	ASTM D5185m	1010	888	1438	718
Calcium	ppm	ASTM D5185m	1070	1004	1600	1764
Phosphorus	ppm	ASTM D5185m	1150	1008	1482	770
Zinc	ppm	ASTM D5185m	1270	1185	1913	966
Sulfur	ppm	ASTM D5185m	2060	2753	3891	2926
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	27.6	37.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.4	7.3	6.2
Visc @ 100°C	cSt	ASTM D445	15.4	12.0	13.3	13.7



Certificate L2367

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

Sample No. : GFL0112133

Lab Number : 06085877

Unique Number : 10873322

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

Received : 12 Feb 2024

Tested : 14 Feb 2024

Diagnosed : 14 Feb 2024 - Wes Davis

GFL Environmental - 045 - Tidewater

3821 Cook Blvd.

Chesapeake, VA

US 23323

Contact: ELVIN RODRIGUEZ

elvinrodriguez@gflenv.com

T:

F:

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)