



Machine Id
723031-303001
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122856	GFL0122877	GFL0118825
Sample Date		Client Info		26 Jun 2024	05 Jun 2024	09 May 2024
Machine Age	hrs	Client Info		21074	20939	20791
Oil Age	hrs	Client Info		21074	148	25859
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	49	33	68
Chromium	ppm	ASTM D5185m	>5	3	2	3
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	9	4	9
Lead	ppm	ASTM D5185m	>30	<1	<1	<1
Copper	ppm	ASTM D5185m	>150	2	3	3
Tin	ppm	ASTM D5185m	>5	<1	0	2
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

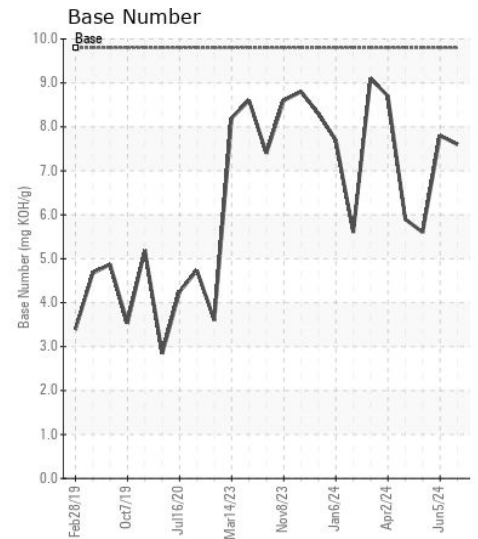
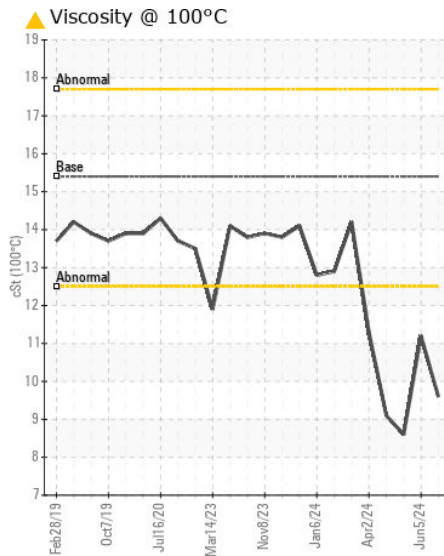
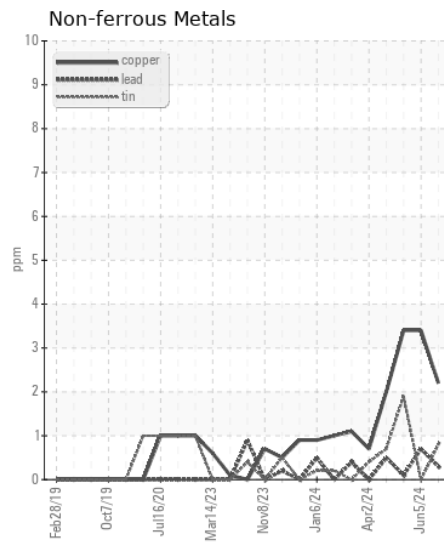
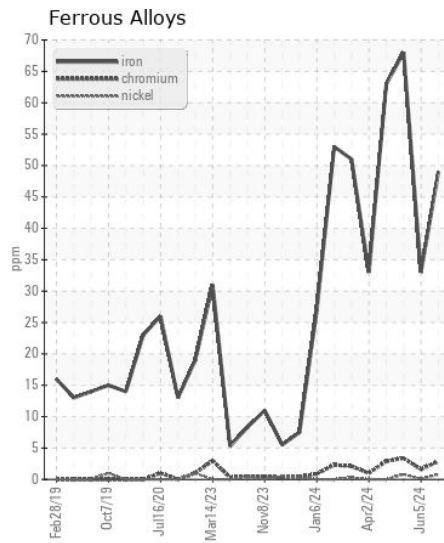
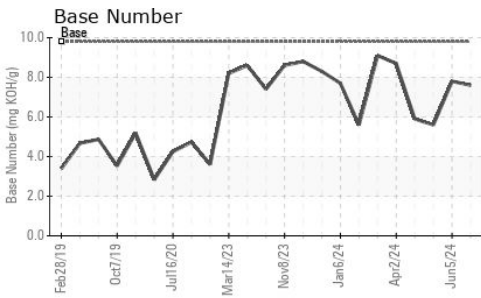
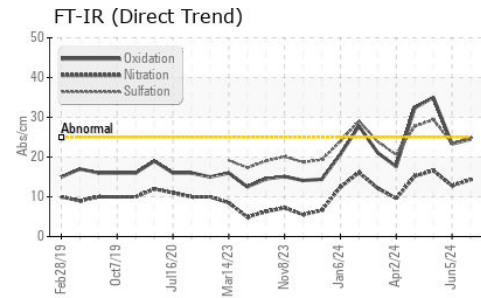
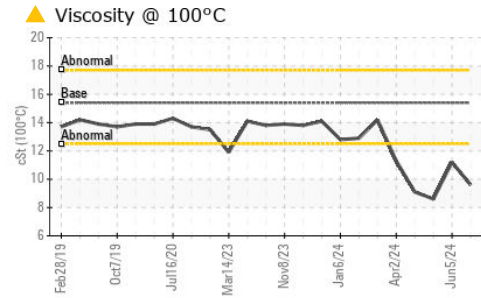
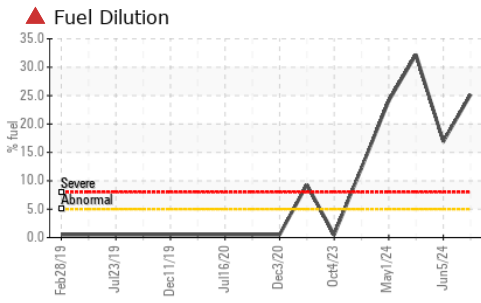
There is a very high amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>20	16	8	17
Potassium	ppm	ASTM D5185m	>20	3	1	3
Fuel	%	ASTM D3524	>5	▲ 25.2	▲ 16.9	▲ 32.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.4	1.1	1.9
Nitration	Abs/cm	*ASTM D7624	>20	14.3	12.8	16.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8	23.5	29.4
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

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	4	16
Boron	ppm	ASTM D5185m	0	4	<1	1
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	66	61	49
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1014	993	733
Calcium	ppm	ASTM D5185m	1070	1203	1174	880
Phosphorus	ppm	ASTM D5185m	1150	1025	1028	811
Zinc	ppm	ASTM D5185m	1270	1321	1294	1000
Sulfur	ppm	ASTM D5185m	2060	2544	2986	2074
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.5	23.3	35.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.6	7.8	5.6
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 9.6	▲ 11.2	▲ 8.6



Certificate L2367

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

Sample No. : GFL0122856

Lab Number : 06225641

Unique Number : 11103838

Test Package : FLEET (Additional Tests: PercentFuel)

Received : 01 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Angela Borella

GFL Environmental - 837 - Harrison TS

22820 S State Route 291

Harrisonville, MO

US 64701

Contact: SARA PATRICK

spatrick@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)