



WEAR

**NORMAL**

CONTAMINATION

**SEVERE**

FLUID CONDITION

**SEVERE**

Area  
**(EIB906)**

Machine Id  
**3665**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (11 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		<b>GFL0072139</b>	GFL0072108	GFL0074590
Sample Date		Client Info		<b>17 Apr 2024</b>	15 Jan 2024	18 Jul 2023
Machine Age	hrs	Client Info		<b>20643</b>	20299	20178
Oil Age	hrs	Client Info		<b>344</b>	600	20178
Filter Age	hrs	Client Info		<b>344</b>	600	19735
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	ATTENTION	SEVERE

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>21</b>	7	20
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>25	<b>0</b>	0	2
Copper	ppm	ASTM D5185m	>100	<b>3</b>	<1	1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

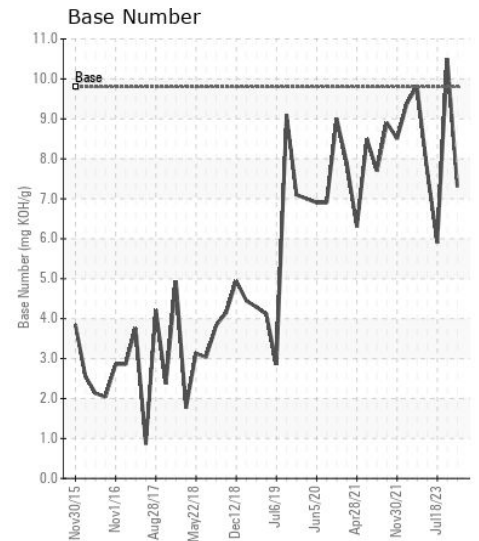
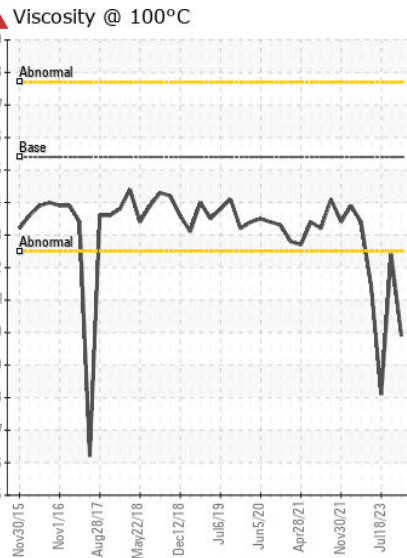
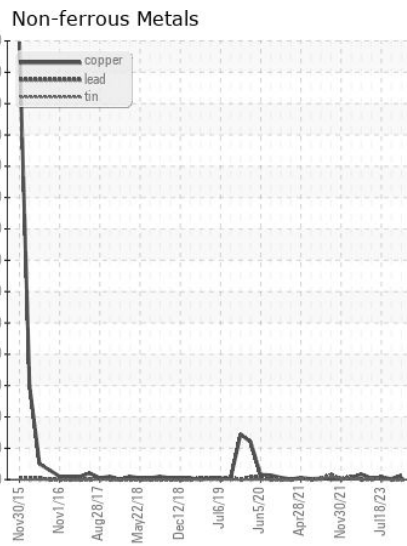
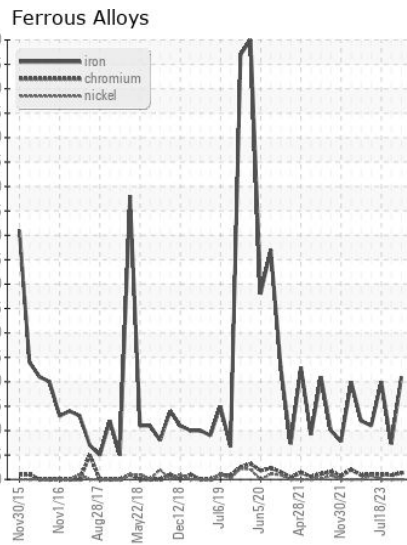
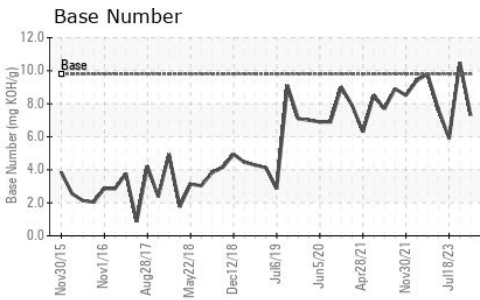
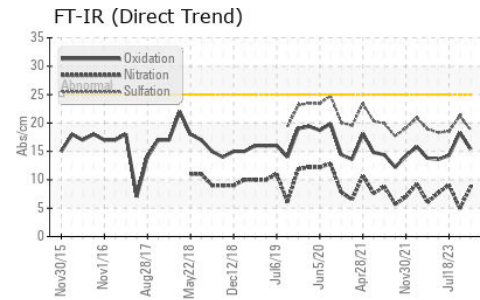
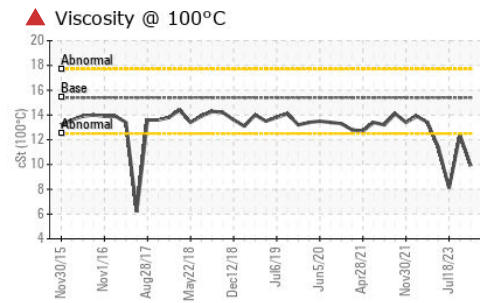
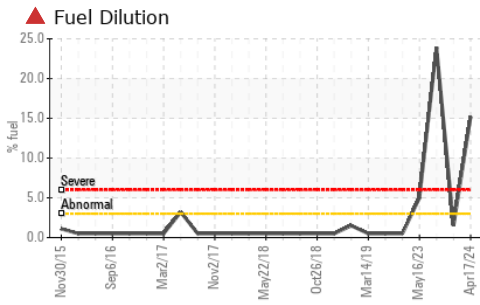
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>12</b>	10	0
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	1
Fuel	%	ASTM D3524	>3.0	<b>▲ 15.2</b>	▲ 1.5	▲ 23.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.4</b>	0.1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.7</b>	4.9	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	21.2	18.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>34</b>	14	30
Boron	ppm	ASTM D5185m	0	<b>5</b>	51	<1
Barium	ppm	ASTM D5185m	0	<b>3</b>	0	2
Molybdenum	ppm	ASTM D5185m	60	<b>50</b>	37	52
Manganese	ppm	ASTM D5185m	0	<b>1</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>768</b>	505	621
Calcium	ppm	ASTM D5185m	1070	<b>911</b>	1472	797
Phosphorus	ppm	ASTM D5185m	1150	<b>829</b>	724	704
Zinc	ppm	ASTM D5185m	1270	<b>982</b>	866	881
Sulfur	ppm	ASTM D5185m	2060	<b>2758</b>	2505	2219
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	18.3	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.3</b>	10.5	5.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>▲ 9.9</b>	12.4	▲ 8.1



Certificate L2367

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

Sample No. : GFL0072139

Lab Number : 06155593

Unique Number : 10991016

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

Received : 22 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 25 Apr 2024 - Wes Davis

GFL Environmental - 094 - Cedartown

2097 Buchanan Highway

Cedartown, GA

US 30125

Contact: WILLIAM FOSTER

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T: (800)207-6618

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)