



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**(43-333HA)**  
Machine Id  
**911013**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0100093</b>	GFL0100133	GFL0090800
Sample Date		Client Info		<b>10 Apr 2024</b>	12 Jan 2024	16 Oct 2023
Machine Age	mls	Client Info		<b>468212</b>	468212	7673
Oil Age	mls	Client Info		<b>468212</b>	468212	468212
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>9</b>	5	6
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>5</b>	5	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

There is no indication of any contamination in the oil.

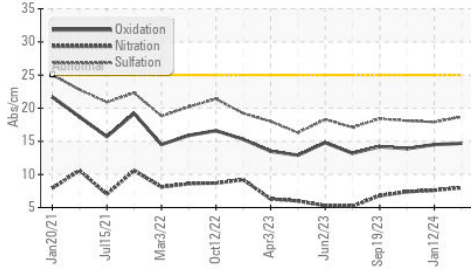
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.5</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	7.6	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.7</b>	17.9	18.1
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**

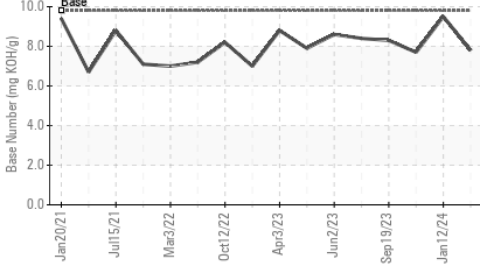
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>4</b>	3	4
Boron	ppm	ASTM D5185m	0	<b>4</b>	4	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>59</b>	58	59
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	1010	<b>991</b>	992	949
Calcium	ppm	ASTM D5185m	1070	<b>1089</b>	1094	1024
Phosphorus	ppm	ASTM D5185m	1150	<b>1065</b>	1083	998
Zinc	ppm	ASTM D5185m	1270	<b>1290</b>	1225	1232
Sulfur	ppm	ASTM D5185m	2060	<b>3739</b>	3338	2951
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	14.5	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.8</b>	9.5	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	13.8	13.9

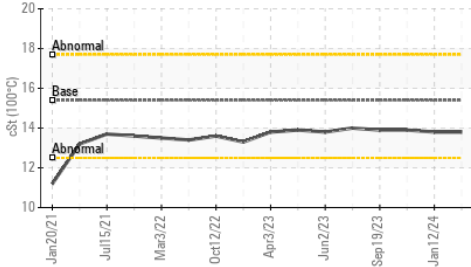
FT-IR (Direct Trend)



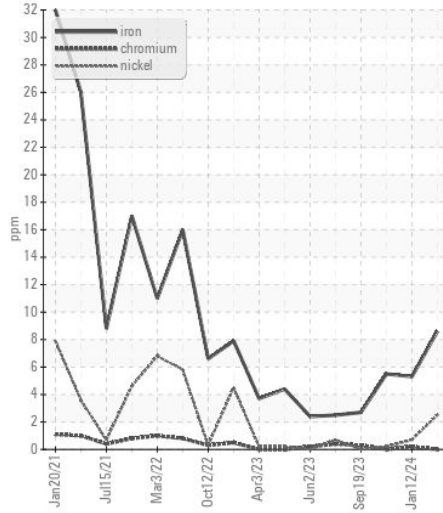
Base Number



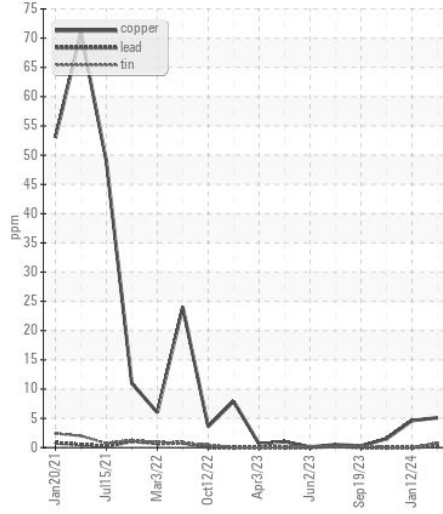
Viscosity @ 100°C



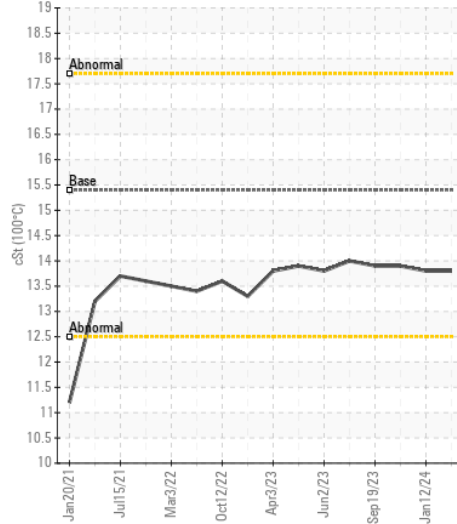
Ferrous Alloys



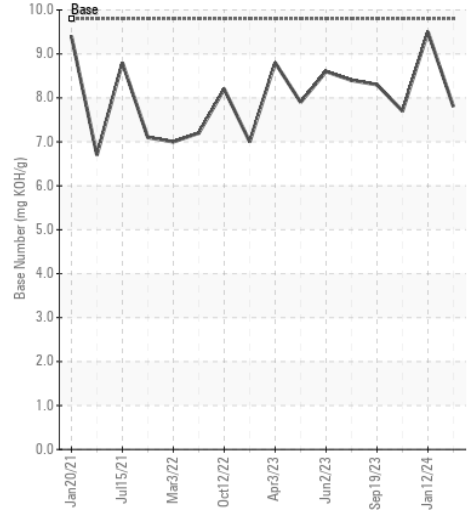
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0100093  
 Lab Number : 06146323  
 Unique Number : 10976401  
 Test Package : FLEET

Received : 11 Apr 2024  
 Tested : 12 Apr 2024  
 Diagnosed : 12 Apr 2024 - Wes Davis

GFL Environmental - 659 - Mechanicsville  
 8280 RICHFOOD RD  
 Mechanicsville, VA  
 US 23116  
 Contact: Dwayne Oliver  
 dwayneoliver@gflenv.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)

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F: