



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

Machine Id  
**929082-260353**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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		<b>GFL0088135</b>	GFL0104917	GFL0088104
Sample Date		Client Info		<b>30 Jan 2024</b>	03 Jan 2024	16 Nov 2023
Machine Age	hrs	Client Info		<b>136467</b>	10987	10841
Oil Age	hrs	Client Info		<b>0</b>	2282	2282
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	9	26
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	4
Copper	ppm	ASTM D5185m	>330	<b>1</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
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**

Elemental level of silicon (Si) above normal.

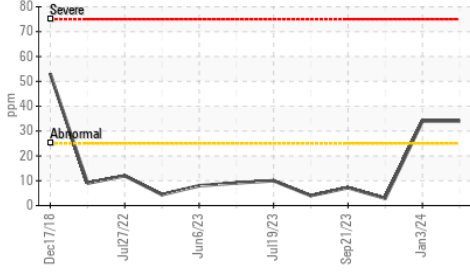
Silicon	ppm	ASTM D5185m	>25	<b>▲ 34</b>	▲ 34	3
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.8	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	9.3	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.2</b>	20.9	17.9
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**

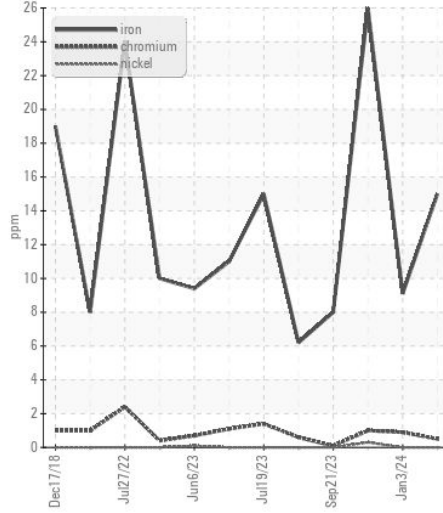
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>3</b>	3	2
Boron	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	56	55
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>933</b>	903	870
Calcium	ppm	ASTM D5185m	1070	<b>1078</b>	991	1010
Phosphorus	ppm	ASTM D5185m	1150	<b>1014</b>	1050	990
Zinc	ppm	ASTM D5185m	1270	<b>1296</b>	1184	1167
Sulfur	ppm	ASTM D5185m	2060	<b>2976</b>	2935	3370
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	17.4	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.8</b>	7.3	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.0</b>	13.1	13.4

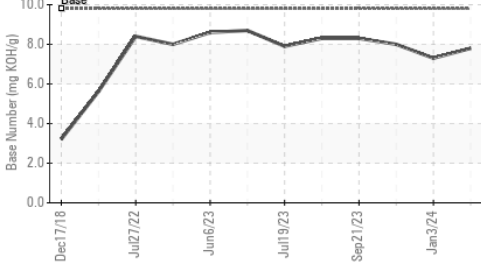
▲ Silicon (ppm)



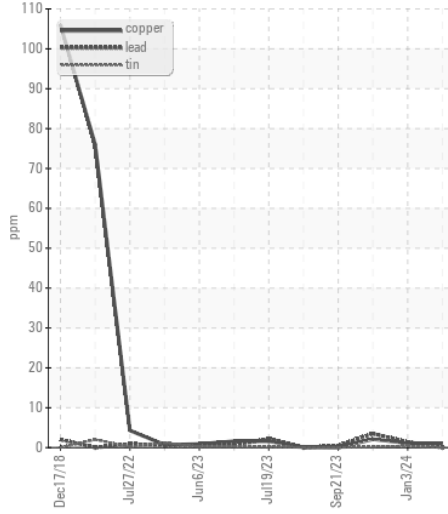
Ferrous Alloys



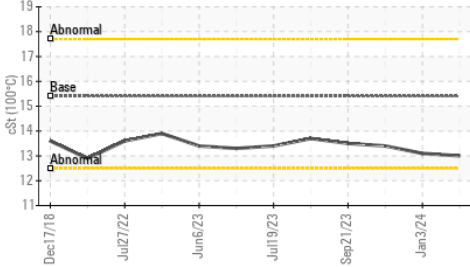
Base Number



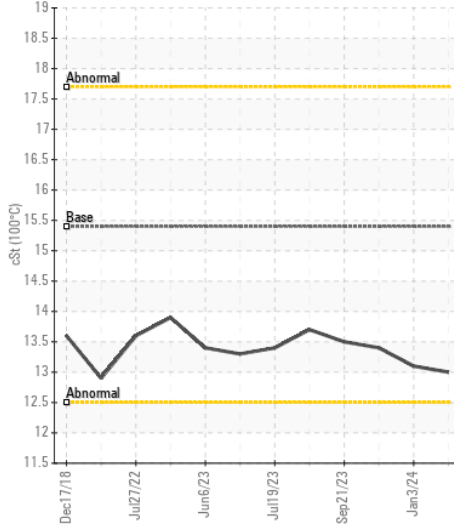
Non-ferrous Metals



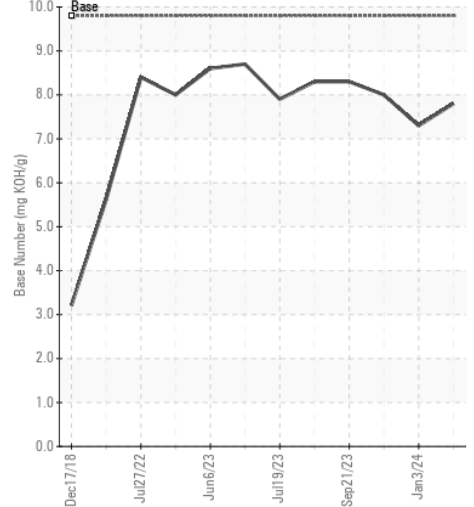
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0088135  
 Lab Number : 06085629  
 Unique Number : 10873074  
 Test Package : FLEET

Received : 12 Feb 2024  
 Tested : 12 Feb 2024  
 Diagnosed : 13 Feb 2024 - Don Baldrige

GFL Environmental - 820 - Joplin Hauling  
 3700 West 7th Street  
 Joplin, MO  
 US 64801

Contact: James Jarrett  
 jjarrett@gflenv.com

T: (417)310-2802

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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