



WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
(YA154627)
Machine Id
10982
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 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		GFL0094487	GFL0058871	GFL0072412
Sample Date		Client Info		20 May 2024	03 Jan 2024	07 Sep 2023
Machine Age	hrs	Client Info		4880	4880	4880
Oil Age	hrs	Client Info		4880	4880	4880
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	13	13	18
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	<1
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Sodium and/or potassium levels remain elevated. Test for glycol is negative.

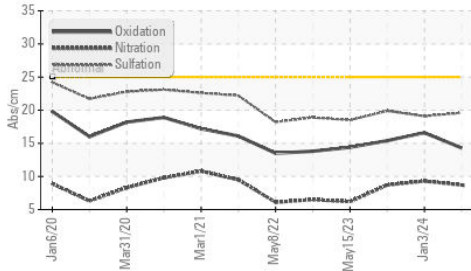
Silicon	ppm	ASTM D5185m	>25	7	4	6
Potassium	ppm	ASTM D5185m	>20	47	2	44
Fuel		WC Method	>3.0	<1.0	▲ 2.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	0.4	0.8
Nitration	Abs/cm	*ASTM D7624	>20	8.7	9.3	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	19.1	19.9
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

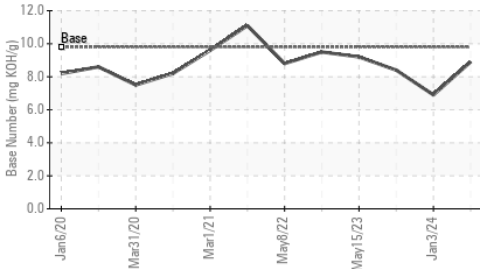
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		53	4	37
Boron	ppm	ASTM D5185m	0	10	7	3
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	66	52	61
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	883	790	1023
Calcium	ppm	ASTM D5185m	1070	1054	939	1345
Phosphorus	ppm	ASTM D5185m	1150	941	751	1086
Zinc	ppm	ASTM D5185m	1270	1156	1066	1345
Sulfur	ppm	ASTM D5185m	2060	3129	2533	3850
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	16.6	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.9	6.9	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	▲ 10.4	14.1

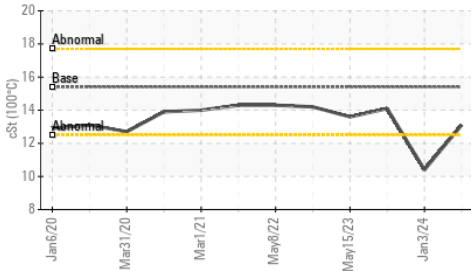
FT-IR (Direct Trend)



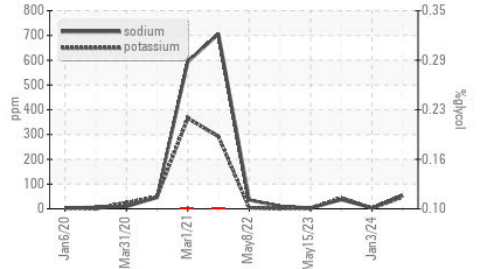
Base Number



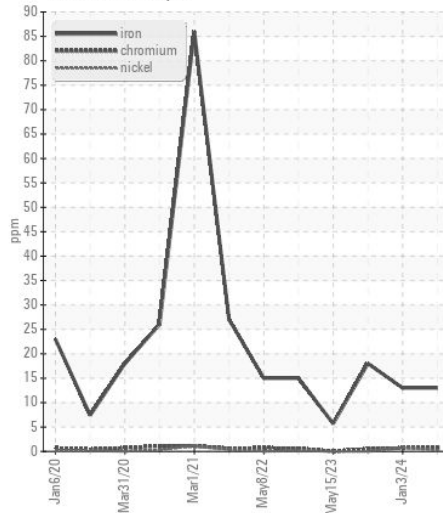
Viscosity @ 100°C



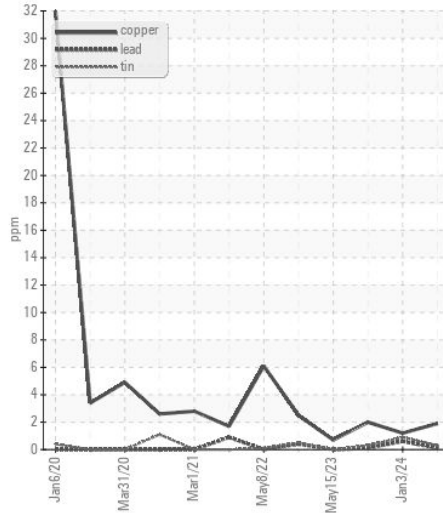
Glycol Contamination



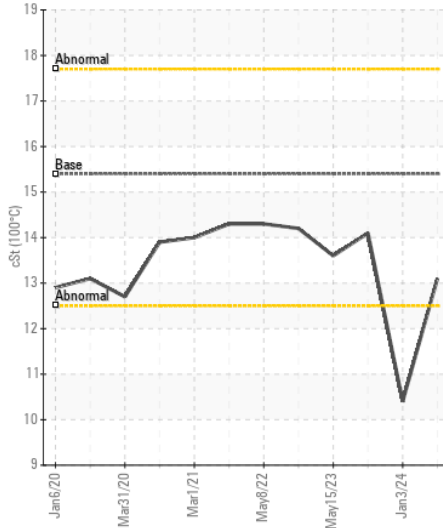
Ferrous Alloys



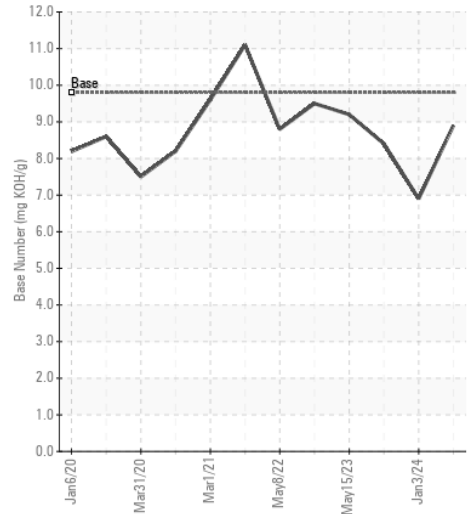
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0094487 **Received** : 23 May 2024
Lab Number : 06188765 **Tested** : 28 May 2024
Unique Number : 11045517 **Diagnosed** : 28 May 2024 - Sean Felton
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 119 - Williamston Hauling/TriEast
 1805 West Main Street
 Williamston, NC
 US 27892
 Contact: Spencer Ligon
 spencer.ligon@gflenv.com
 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)