



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL



Machine Id
824023
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0097828	GFL0097850	GFL0103589
Sample Date		Client Info		17 Apr 2024	21 Mar 2024	21 Dec 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		600	515	600
Filter Age	hrs	Client Info		600	515	600
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	12	18	6
Chromium	ppm	ASTM D5185m	>5	1	1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	3	3	3
Lead	ppm	ASTM D5185m	>30	1	0	0
Copper	ppm	ASTM D5185m	>150	1	<1	34
Tin	ppm	ASTM D5185m	>5	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Light fuel dilution occurring.

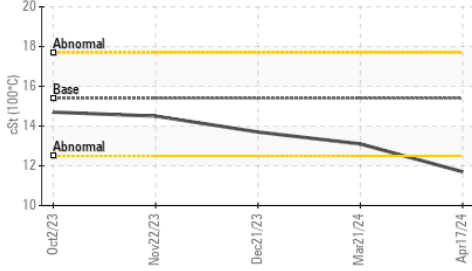
Silicon	ppm	ASTM D5185m	>20	10	5	3
Potassium	ppm	ASTM D5185m	>20	2	0	2
Fuel	%	ASTM D3524	>5	▲ 3.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.9	7.6	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	19.9	18.6
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

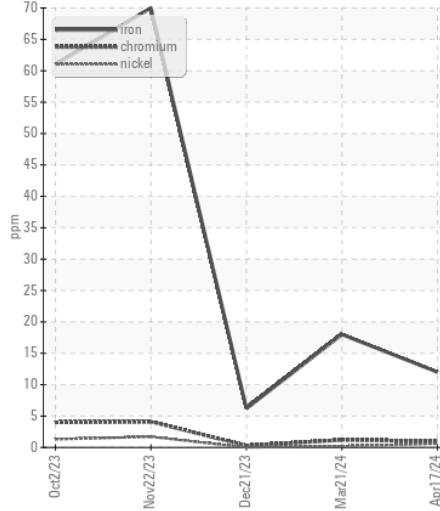
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	4	0
Boron	ppm	ASTM D5185m	0	● 327	<1	2
Barium	ppm	ASTM D5185m	0	0	0	9
Molybdenum	ppm	ASTM D5185m	60	75	53	60
Manganese	ppm	ASTM D5185m	0	<1	0	0
Magnesium	ppm	ASTM D5185m	1010	● 407	931	930
Calcium	ppm	ASTM D5185m	1070	1265	1003	1047
Phosphorus	ppm	ASTM D5185m	1150	1005	875	1034
Zinc	ppm	ASTM D5185m	1270	1095	1169	1189
Sulfur	ppm	ASTM D5185m	2060	3281	3323	3182
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	17.3	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.6	8.2	8.3
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 11.7	13.1	13.7

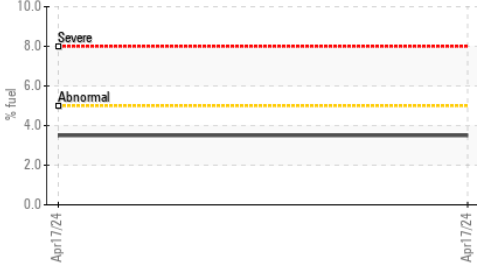
▲ Viscosity @ 100°C



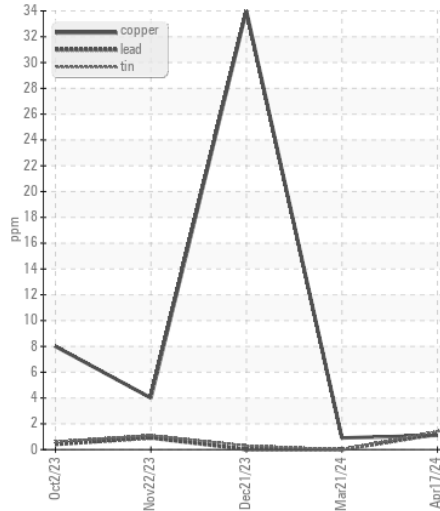
Ferrous Alloys



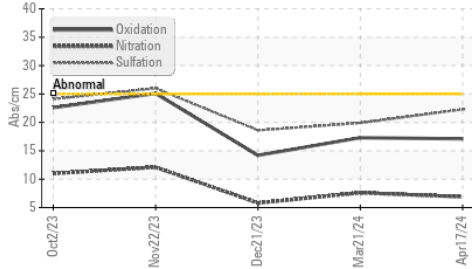
▲ Fuel Dilution



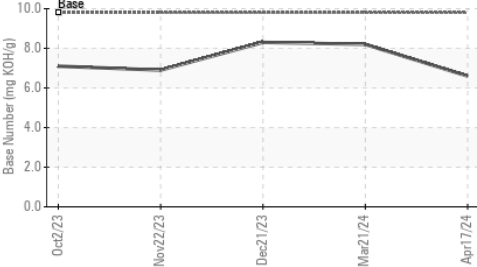
Non-ferrous Metals



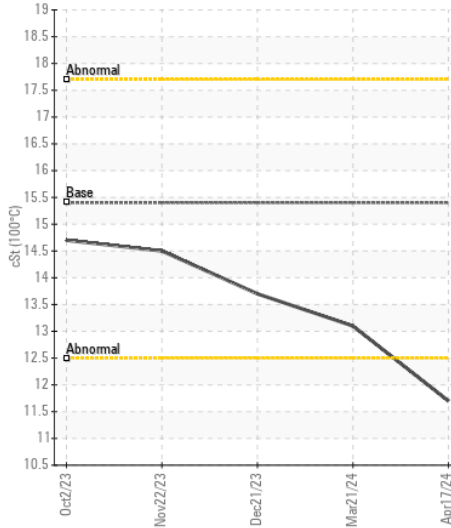
FT-IR (Direct Trend)



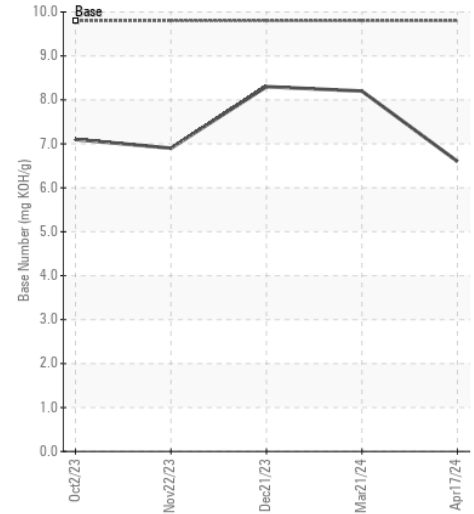
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0097828

Lab Number : 06156752

Unique Number : 10992175

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

Received : 22 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 25 Apr 2024 - Wes Davis

GFL Environmental - 958 - Tri County HC Morton

1090 W. Jefferson St.

Morton, IL

US 61550

Contact: Bryan Link

blink@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)

T:

F: