



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
1103M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (36 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110021	GFL0109992	GFL0104255
Sample Date		Client Info		30 Jan 2024	15 Jan 2024	11 Jan 2024
Machine Age	hrs	Client Info		15989	15844	15804
Oil Age	hrs	Client Info		600	600	15804
Filter Age	hrs	Client Info		600	600	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>65	10	19	4
Chromium	ppm	ASTM D5185m	>5	<1	1	0
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>5	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>35	7	5	2
Lead	ppm	ASTM D5185m	>10	1	0	<1
Copper	ppm	ASTM D5185m	>180	13	50	0
Tin	ppm	ASTM D5185m	>8	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Elemental level of silicon (Si) above normal.

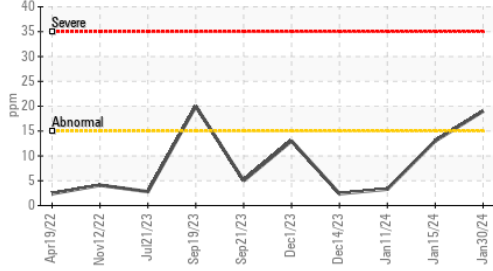
Silicon	ppm	ASTM D5185m	>15	▲ 19	13	3
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	5.2	7.1	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.1	18.4
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

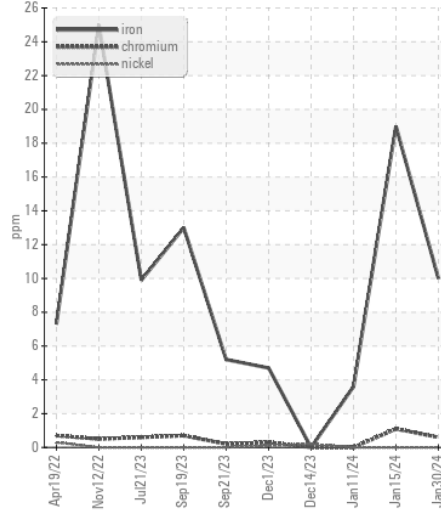
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	8	<1
Boron	ppm	ASTM D5185m	0	<1	<1	3
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	49	59	56
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	858	1000	914
Calcium	ppm	ASTM D5185m	1070	919	1034	949
Phosphorus	ppm	ASTM D5185m	1150	934	1020	1061
Zinc	ppm	ASTM D5185m	1270	1132	1282	1229
Sulfur	ppm	ASTM D5185m	2060	2584	2544	3048
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.4	15.1	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.0	7.8	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	14.1	13.9

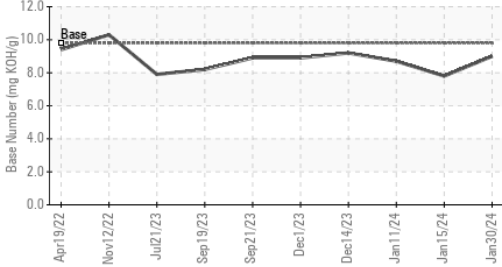
▲ Silicon (ppm)



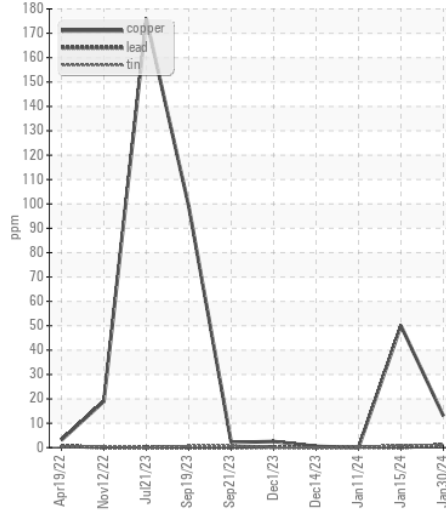
Ferrous Alloys



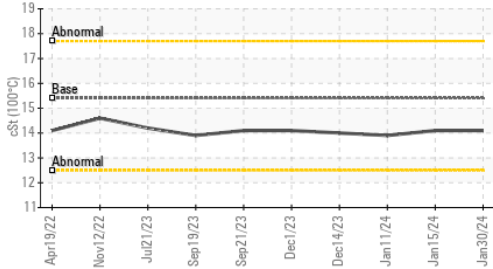
Base Number



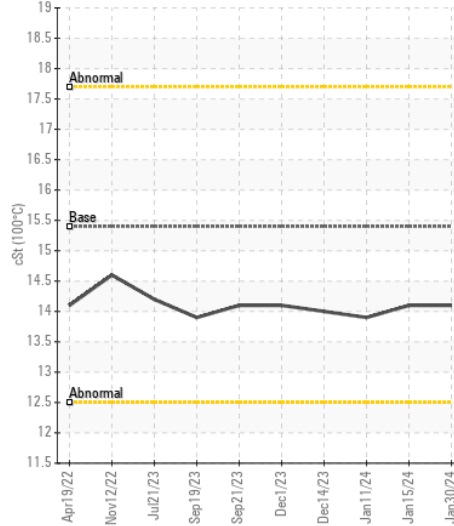
Non-ferrous Metals



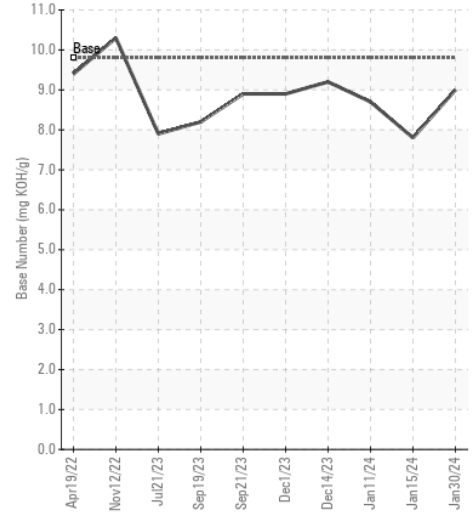
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0110021
 Lab Number : 06076541
 Unique Number : 10858632
 Test Package : FLEET

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340
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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)