



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
427123
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

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		GFL0098402	GFL0085655	GFL0079531
Sample Date		Client Info		04 Jan 2024	24 Aug 2023	30 Jun 2023
Machine Age	hrs	Client Info		3904	8309	3083
Oil Age	hrs	Client Info		3904	8309	3083
Filter Age	hrs	Client Info		3904	8309	3083
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	>100	31	19	25
Chromium	ppm	ASTM D5185m	>20	3	1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	5	6
Lead	ppm	ASTM D5185m	>40	8	3	4
Copper	ppm	ASTM D5185m	>330	3	2	2
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

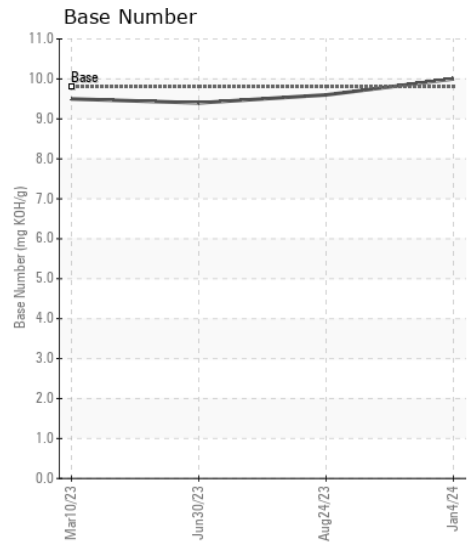
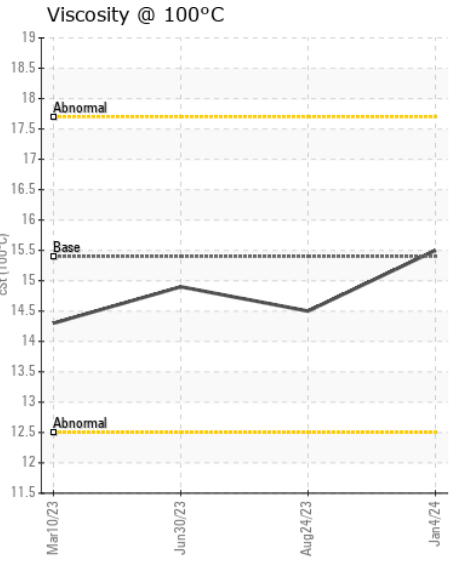
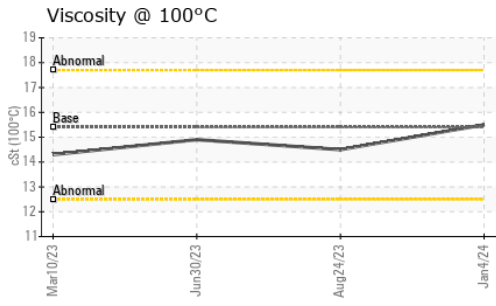
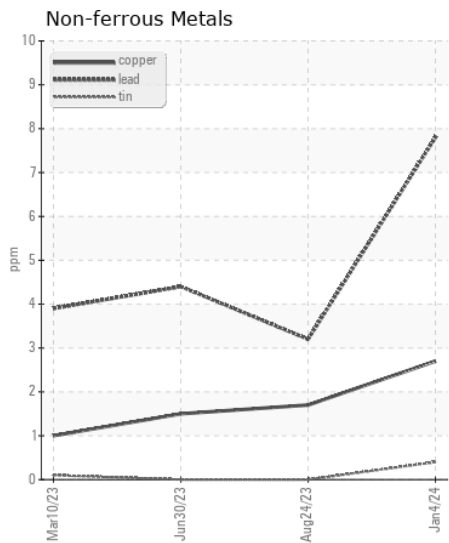
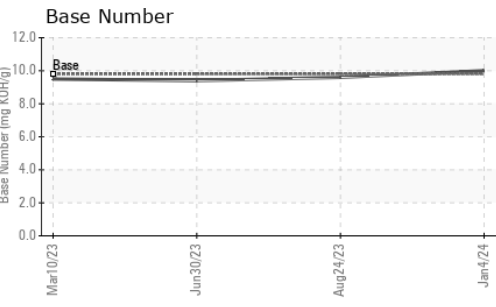
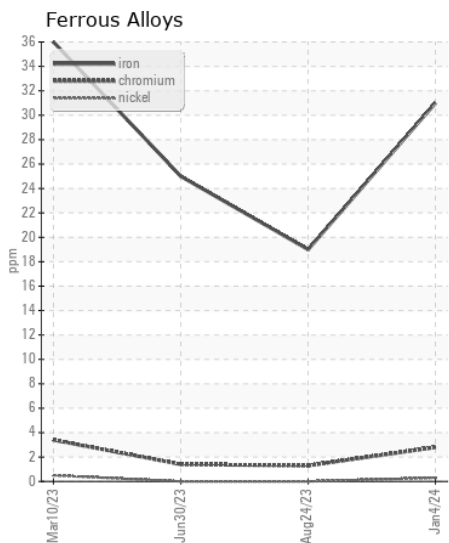
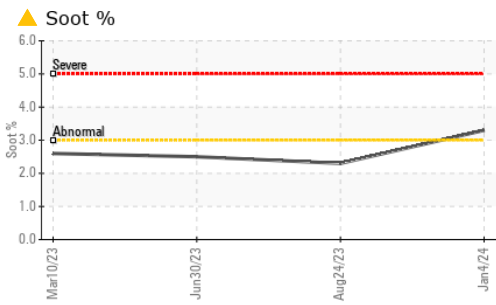
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>25	6	7	7
Potassium	ppm	ASTM D5185m	>20	19	2	2
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	3.3	2.3	2.5
Nitration	Abs/cm	*ASTM D7624	>20	14.0	11.2	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.2	27.9	28.9
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		5	6	<1
Boron	ppm	ASTM D5185m	0	87	262	255
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	92	123	127
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	763	683	596
Calcium	ppm	ASTM D5185m	1070	1246	1640	1490
Phosphorus	ppm	ASTM D5185m	1150	854	689	686
Zinc	ppm	ASTM D5185m	1270	1001	857	826
Sulfur	ppm	ASTM D5185m	2060	2830	2846	2669
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.1	20.3	21.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	10.0	9.6	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	15.5	14.5	14.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098402 **Received** : 11 Jan 2024
Lab Number : 06058657 **Diagnosed** : 12 Jan 2024
Unique Number : 10830039 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution)

GFL Environmental - 409 - Wood Island LF
 E10081 State Hwy M28
 Wetmore, MI
 US 49895
 Contact: Service Manager

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: