



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
SS0156
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample
 Comment: Sample only)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0116270	GFL0094863	GFL0077502
Sample Date		Client Info		14 Mar 2024	08 Nov 2023	17 Jul 2023
Machine Age	hrs	Client Info		3148	3124	3081
Oil Age	hrs	Client Info		67	43	0
Filter Age	hrs	Client Info		67	43	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	19	21	48
Chromium	ppm	ASTM D5185m	>20	10	10	22
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		1	1	4
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	8	18
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	0	<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

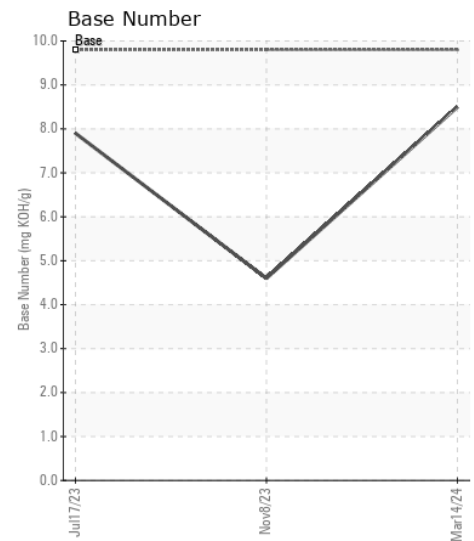
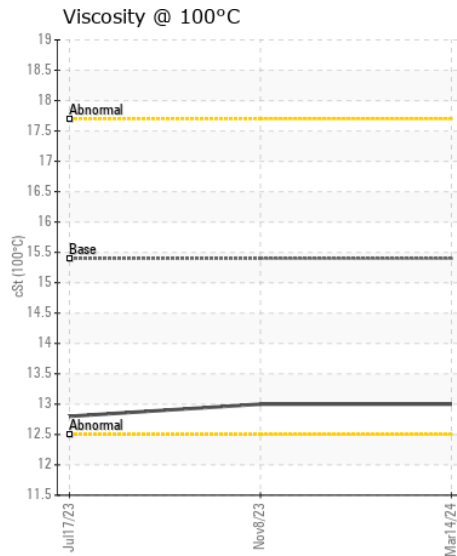
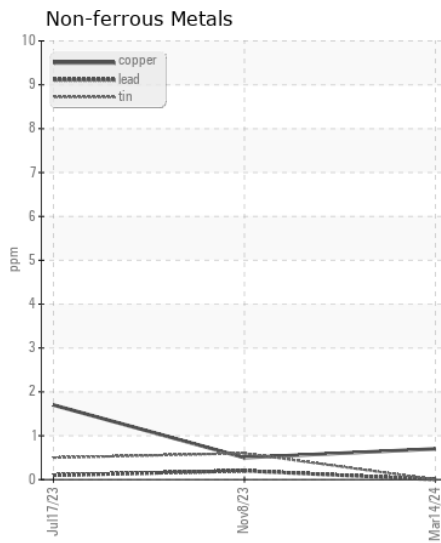
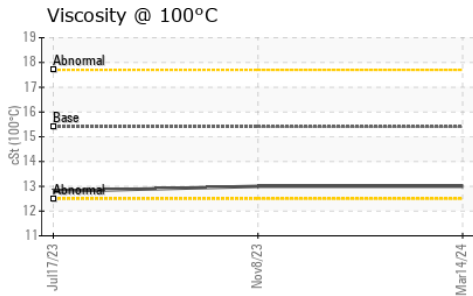
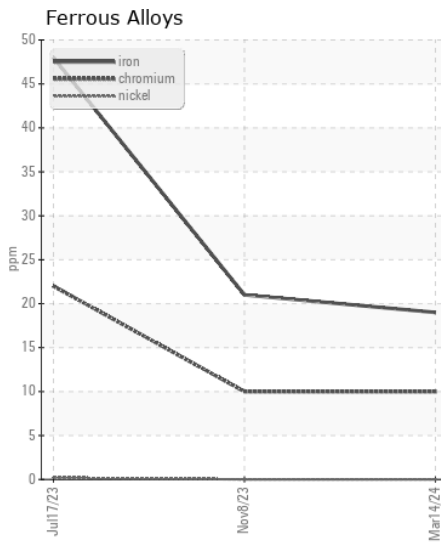
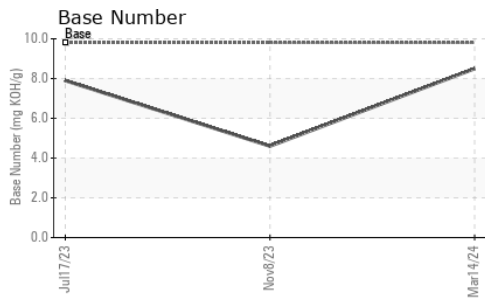
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	22	▲ 26	▲ 44
Potassium	ppm	ASTM D5185m	>20	2	5	5
Fuel		WC Method	>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	0.1	0.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.4	10.6	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	25.9	18.3
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		3	4	5
Boron	ppm	ASTM D5185m	0	11	16	22
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	48	46	24
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	1010	719	687	369
Calcium	ppm	ASTM D5185m	1070	1339	1384	1979
Phosphorus	ppm	ASTM D5185m	1150	972	1009	925
Zinc	ppm	ASTM D5185m	1270	1147	1206	1153
Sulfur	ppm	ASTM D5185m	2060	3716	3308	4210
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.7	21.8	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.5	4.6	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.0	13.0	12.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116270
Lab Number : 06122969
Unique Number : 10937120
Test Package : FLEET

Received : 19 Mar 2024
Tested : 20 Mar 2024
Diagnosed : 21 Mar 2024 - Don Baldrige

GFL Environmental - 625 - Harrison Hauling
 4102 Industrial Pkwy
 Harrison, MI
 US 48625

Contact: RON TROJANEK
 ront@northerna1.com

T: (231)624-0372

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)