



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
522011-847
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- 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		GFL0051025	GFL0018757	GFL0051013
Sample Date		Client Info		20 Feb 2024	02 Nov 2023	18 Sep 2023
Machine Age	hrs	Client Info		19785	0	19172
Oil Age	hrs	Client Info		670	600	600
Filter Age	hrs	Client Info		670	600	600
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	7	85	22
Chromium	ppm	ASTM D5185m	>20	0	7	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		13	0	9
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	6	7
Lead	ppm	ASTM D5185m	>40	0	60	4
Copper	ppm	ASTM D5185m	>330	0	12	<1
Tin	ppm	ASTM D5185m	>15	0	8	<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

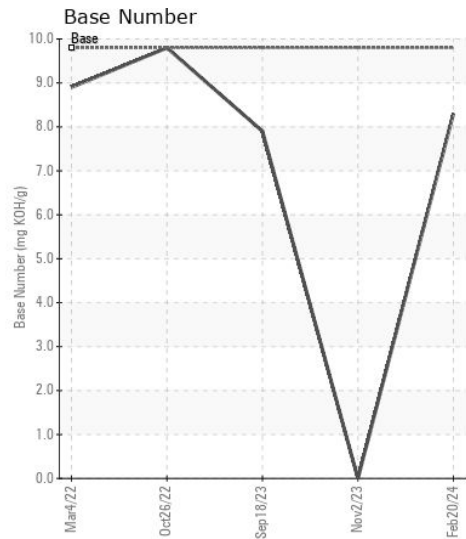
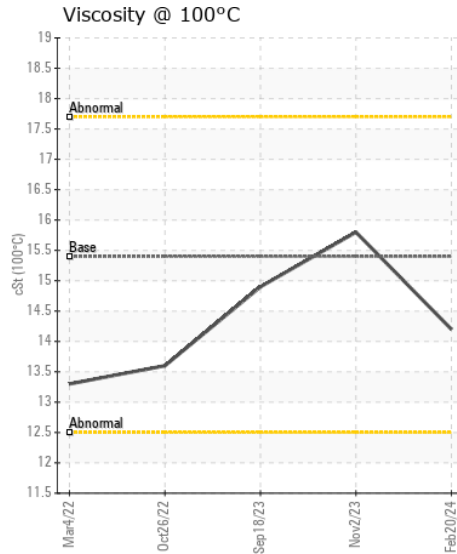
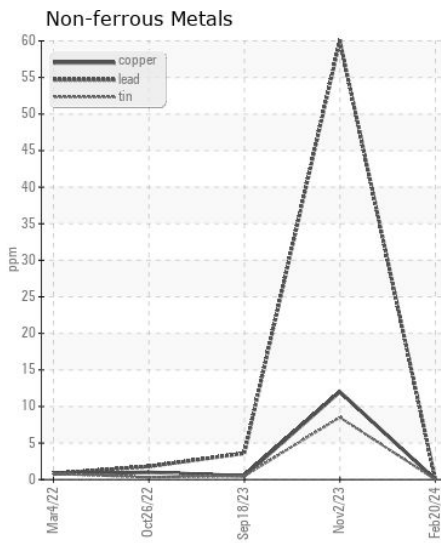
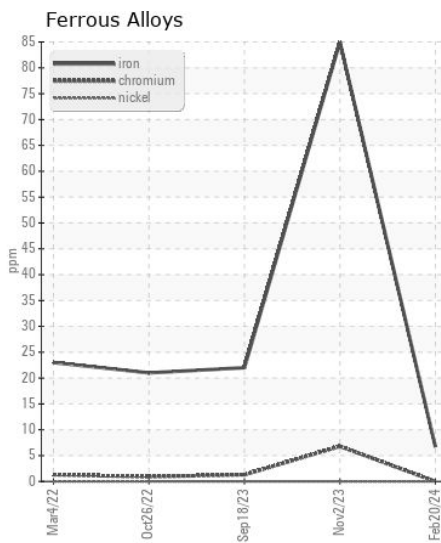
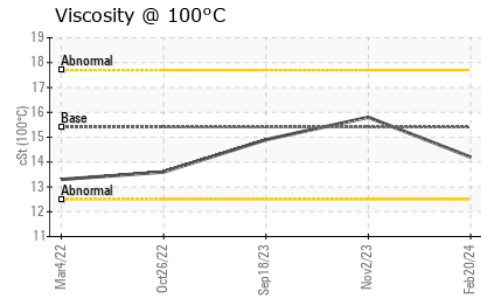
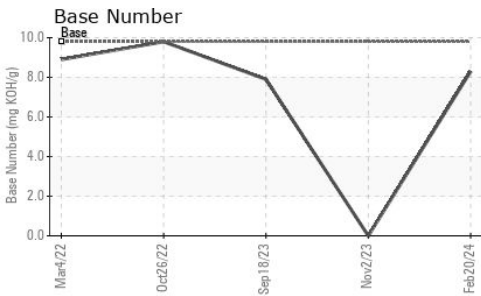
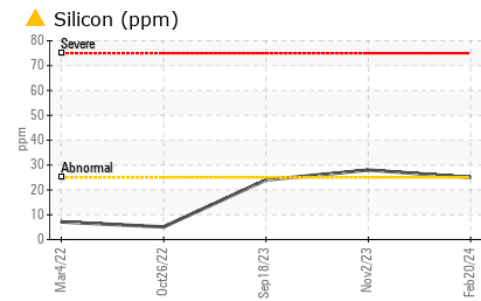
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>25	25	28	24
Potassium	ppm	ASTM D5185m	>20	7	27	8
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	0.5	4.6	1.3
Nitration	Abs/cm	*ASTM D7624	>20	7.5	17.4	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	35.1	28.4
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		2	11	3
Boron	ppm	ASTM D5185m	0	90	14	19
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	41	49	39
Manganese	ppm	ASTM D5185m	0	<1	2	<1
Magnesium	ppm	ASTM D5185m	1010	713	638	874
Calcium	ppm	ASTM D5185m	1070	1327	1725	1421
Phosphorus	ppm	ASTM D5185m	1150	685	1036	831
Zinc	ppm	ASTM D5185m	1270	789	1306	1017
Sulfur	ppm	ASTM D5185m	2060	2861	2716	3616
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.2	26.9	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.3	0.0	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	15.8	14.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0051025 **Received** : 28 Feb 2024
Lab Number : 06103592 **Tested** : 29 Feb 2024
Unique Number : 10901822 **Diagnosed** : 01 Mar 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 632 - SWD Harrison
 4102 Industrail Pkwy
 Harrison, MI
 US 48625
 Contact: RON TROJANEK
 rtrojanek@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)