



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
(TX302712)
Machine Id
10819
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0119072	GFL0023774	GFL0052232
Sample Date		Client Info		22 May 2024	18 Jan 2024	16 Jan 2023
Machine Age	hrs	Client Info		11771	11771	11771
Oil Age	hrs	Client Info		11771	11771	14582
Filter Age	hrs	Client Info		0	0	322
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	62	53	8
Chromium	ppm	ASTM D5185m	>20	3	3	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 38	▲ 36	9
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	11	11	6
Tin	ppm	ASTM D5185m	>15	<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

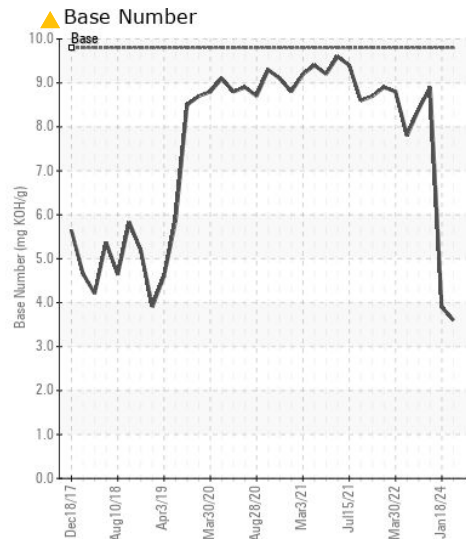
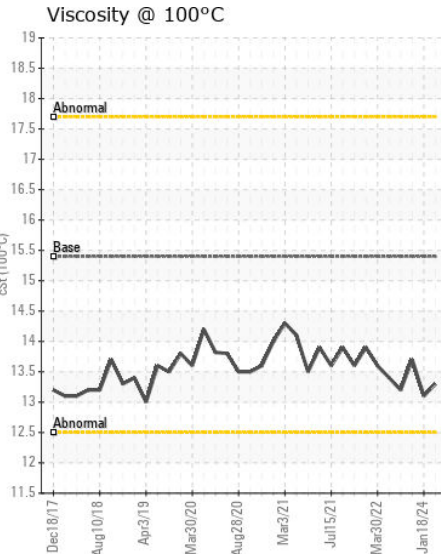
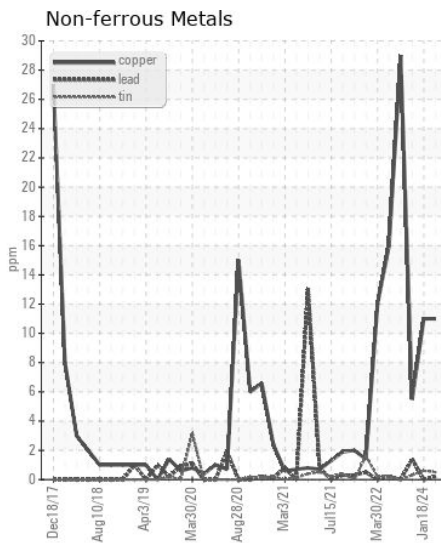
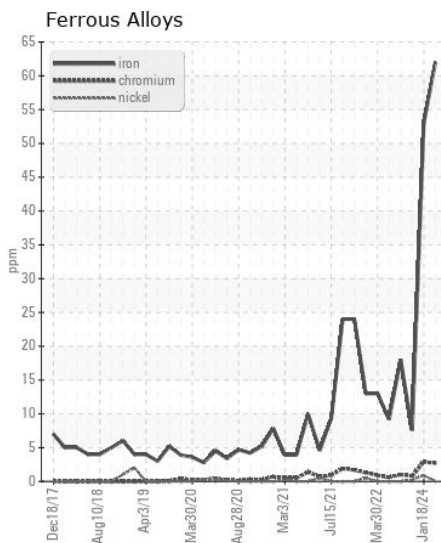
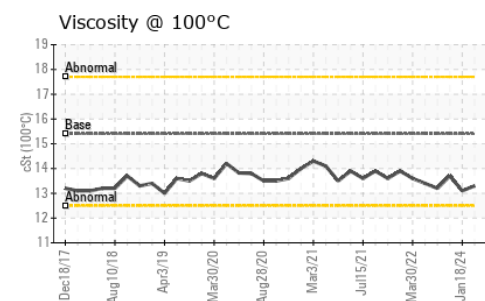
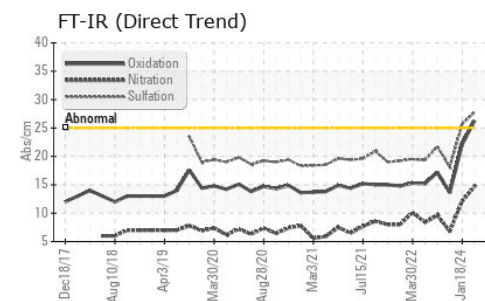
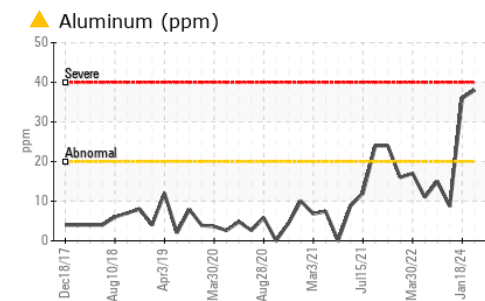
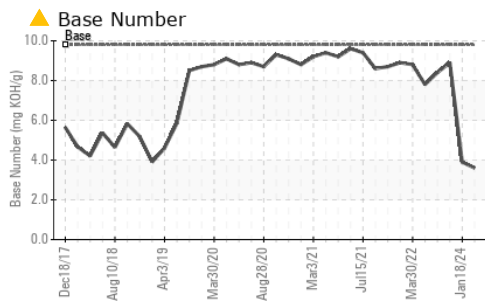
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	3
Potassium	ppm	ASTM D5185m	>20	16	17	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	1.1	1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	14.7	12.1	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.8	25.7	18.1
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	3	0
Boron	ppm	ASTM D5185m	0	0	1	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	63	69	51
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	984	1110	897
Calcium	ppm	ASTM D5185m	1070	1110	1171	1058
Phosphorus	ppm	ASTM D5185m	1150	1057	1140	921
Zinc	ppm	ASTM D5185m	1270	1257	1431	1182
Sulfur	ppm	ASTM D5185m	2060	2789	2972	3011
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.3	22.1	13.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 3.6	▲ 3.9	8.9
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.1	13.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0119072 **Received** : 24 May 2024
Lab Number : 06191430 **Tested** : 29 May 2024
Unique Number : 11048182 **Diagnosed** : 29 May 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 045 - Tidewater
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 Chesapeake, VA
 US 23323
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 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)