



OIL ANALYSIS REPORT

Sample Rating Trend

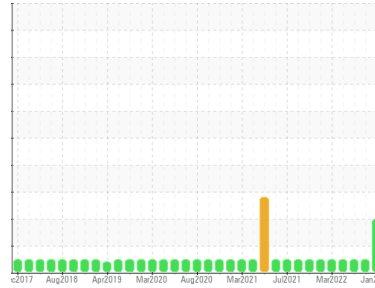
DEGRADATION

Area
(TX302712)

Machine Id
10819

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)



DIAGNOSIS

Recommendation

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

Wear

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

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0023774	GFL0052232	GFL0052181
Sample Date	Client Info		18 Jan 2024	16 Jan 2023	08 Nov 2022
Machine Age	hrs	Client Info	11771	11771	11771
Oil Age	hrs	Client Info	11771	14582	14260
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	53	8	18
Chromium	ppm	ASTM D5185m >20	3	<1	1
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	▲ 36	9	15
Lead	ppm	ASTM D5185m >40	0	1	0
Copper	ppm	ASTM D5185m >330	11	6	29
Tin	ppm	ASTM D5185m >15	<1	<1	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	1	<1	8
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	69	51	60
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	1110	897	878
Calcium	ppm	ASTM D5185m 1070	1171	1058	1083
Phosphorus	ppm	ASTM D5185m 1150	1140	921	947
Zinc	ppm	ASTM D5185m 1270	1431	1182	1170
Sulfur	ppm	ASTM D5185m 2060	2972	3011	3235

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	3	2
Sodium	ppm	ASTM D5185m	3	0	0
Potassium	ppm	ASTM D5185m >20	17	5	4

INFRA-RED

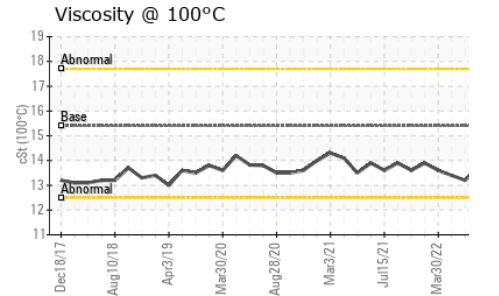
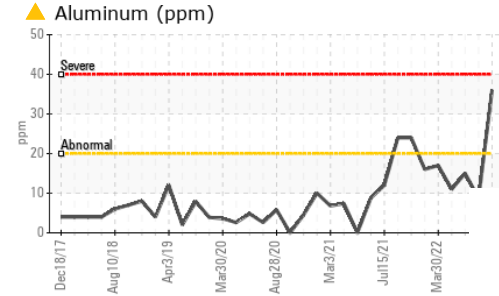
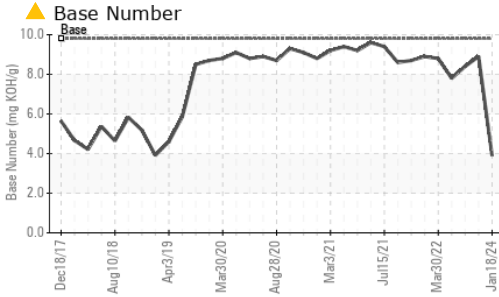
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1	0.3	0.6
Nitration	Abs/cm	*ASTM D7624 >20	12.1	6.8	9.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.7	18.1	21.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.1	13.6	17.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 3.9	8.9	8.4



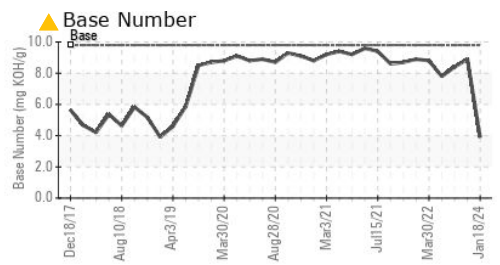
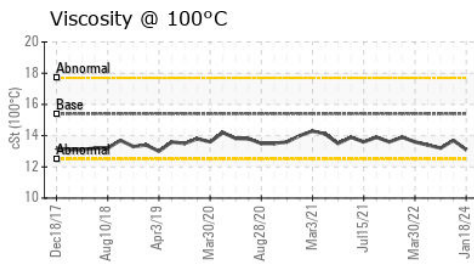
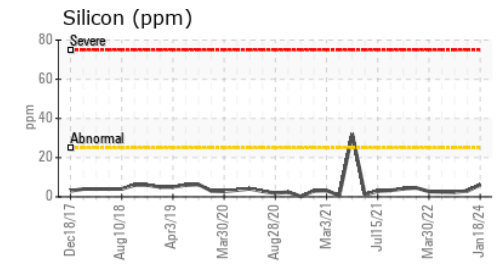
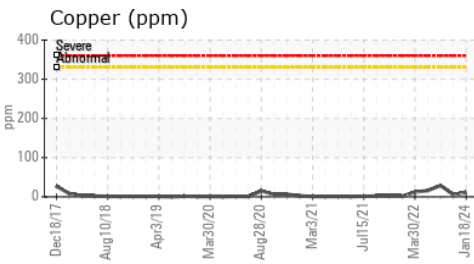
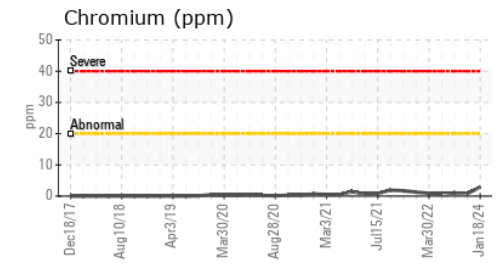
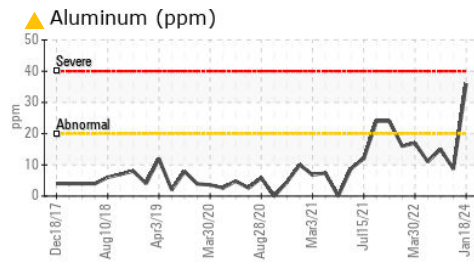
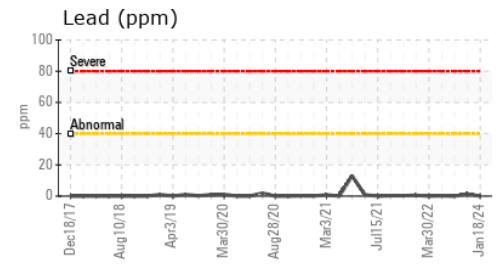
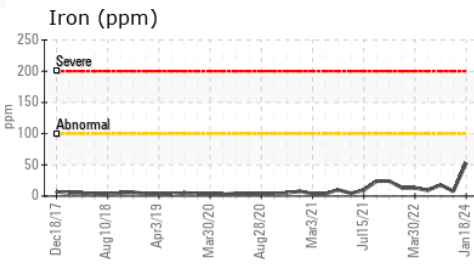
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.7	13.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0023774 **Recieved** : 19 Jan 2024
Lab Number : 06065387 **Diagnosed** : 22 Jan 2024
Unique Number : 10836769 **Diagnostician** : Don Baldrige
Test Package : MOB1+

GFL Environmental - 045 - Tidewater
 3821 Cook Blvd.
 Chesapeake, VA
 US 23323
 Contact: ELVIN RODRIGUEZ
 elvinrodriguez@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)