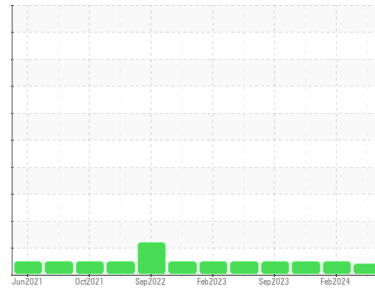




OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id
829056-101294

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0109343	GFL0109260	GFL0077272
Sample Date	Client Info		04 Apr 2024	07 Feb 2024	22 Dec 2023
Machine Age	hrs	Client Info	9761	9757	9738
Oil Age	hrs	Client Info	23	19	133
Oil Changed	Client Info		Changed	Not Changd	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	4	2	<1
Chromium	ppm	ASTM D5185m >20	0	0	0
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	18	19	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	1	<1
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	<1	1	10
Tin	ppm	ASTM D5185m >15	0	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	31	33	14
Barium	ppm	ASTM D5185m 0	0	0	<1
Molybdenum	ppm	ASTM D5185m 60	50	47	57
Manganese	ppm	ASTM D5185m 0	0	0	<1
Magnesium	ppm	ASTM D5185m 1010	939	867	847
Calcium	ppm	ASTM D5185m 1070	1339	1201	1134
Phosphorus	ppm	ASTM D5185m 1150	1154	1060	1013
Zinc	ppm	ASTM D5185m 1270	1379	1258	1162
Sulfur	ppm	ASTM D5185m 2060	4535	3368	2864

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	6	3
Sodium	ppm	ASTM D5185m	<1	1	4
Potassium	ppm	ASTM D5185m >20	<1	<1	0

INFRA-RED

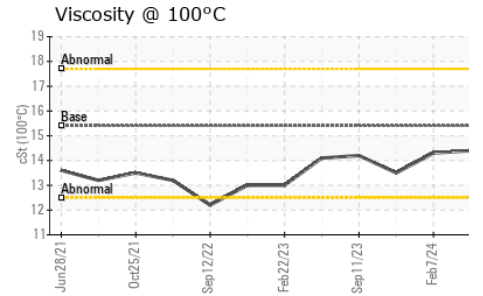
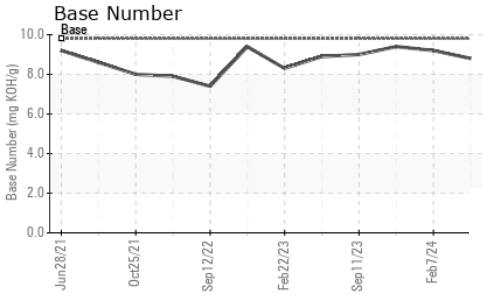
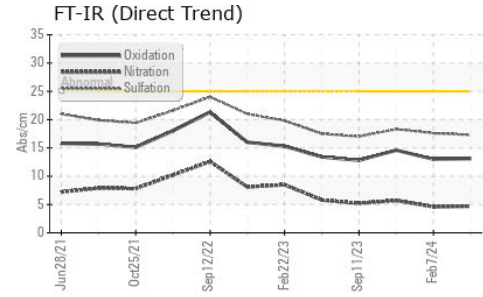
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	4.7	4.6	5.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.3	17.6	18.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.1	13.0	14.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.8	9.2	9.4



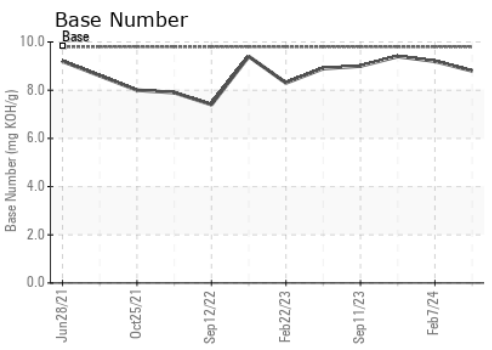
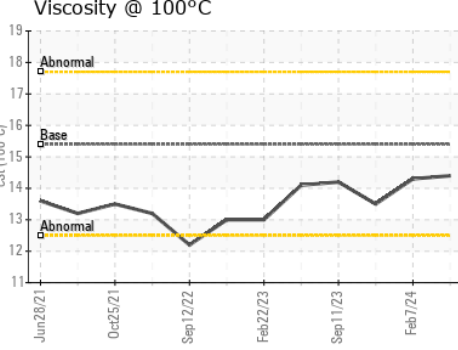
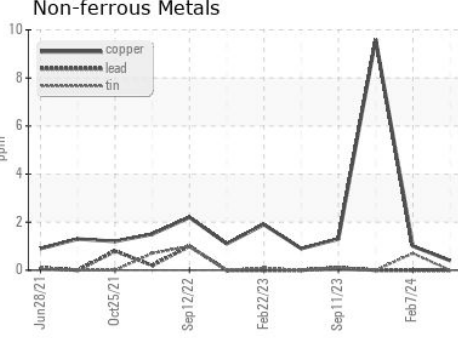
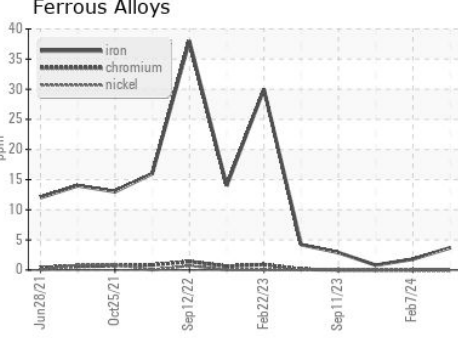
OIL ANALYSIS REPORT



PARAMETER	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	▲ MODER	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	14.4	14.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109343
Lab Number : 06139702
Unique Number : 10964510
Test Package : FLEET
Received : 05 Apr 2024
Tested : 06 Apr 2024
Diagnosed : 07 Apr 2024 - Don Baldrige

GFL Environmental - 893 - OK East Hauling
 2100 Lilly Street
 Seminole, OK
 US 74868
 Contact: Roger Barlow
 rbarlow@gflenv.com
 T: (405)204-6183
 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)