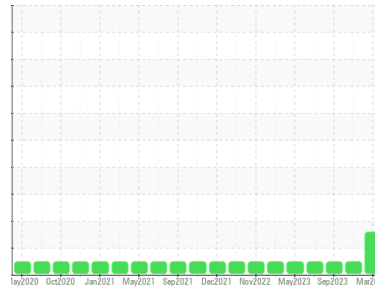




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
828041-1053

Component
Diesel Engine

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

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

Elemental level of silicon (Si) above normal.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0058057	GFL0100156	GFL0058035
Sample Date	Client Info	27 Mar 2024	26 Dec 2023	14 Sep 2023
Machine Age	hrs	12722	12230	12088
Oil Age	hrs	492	142	554
Oil Changed	Client Info	Not Changed	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 >110	17	4	11
Chromium	ppm ASTM D5185m >4	<1	0	1
Nickel	ppm ASTM D5185m >2	<1	0	<1
Titanium	ppm ASTM D5185m	<1	<1	<1
Silver	ppm ASTM D5185m >2	<1	0	0
Aluminum	ppm ASTM D5185m >25	3	<1	<1
Lead	ppm ASTM D5185m >45	1	<1	3
Copper	ppm ASTM D5185m >85	5	1	<1
Tin	ppm ASTM D5185m >4	<1	0	2
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	3	0	5
Barium	ppm ASTM D5185m 0	0	0	44
Molybdenum	ppm ASTM D5185m 60	62	52	60
Manganese	ppm ASTM D5185m 0	<1	0	1
Magnesium	ppm ASTM D5185m 1010	987	932	899
Calcium	ppm ASTM D5185m 1070	1089	1014	1029
Phosphorus	ppm ASTM D5185m 1150	1053	931	933
Zinc	ppm ASTM D5185m 1270	1290	1205	1186
Sulfur	ppm ASTM D5185m 2060	3627	2916	3068

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	▲ 44	27	6
Sodium	ppm ASTM D5185m	3	1	5
Potassium	ppm ASTM D5185m >20	2	1	4

INFRA-RED

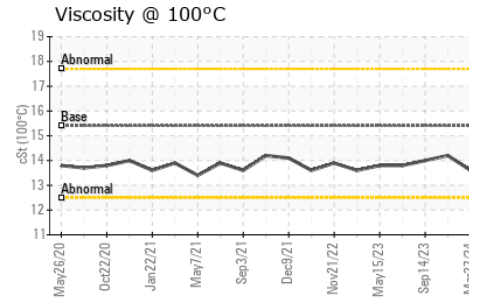
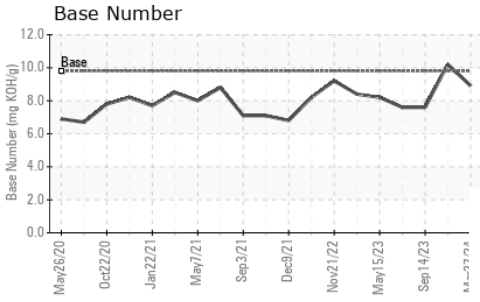
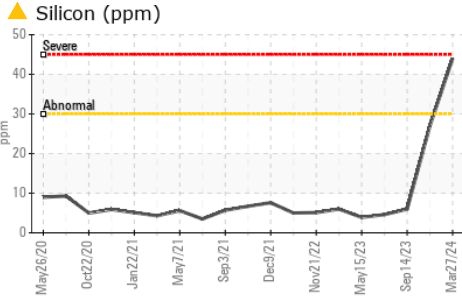
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.3	0.1	0.7
Nitration	Abs/cm *ASTM D7624 >20	6.8	4.7	7.9
Sulfation	Abs/.1mm *ASTM D7415 >30	18.8	17.1	20.1

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.7	13.3	15.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.9	10.2	7.6



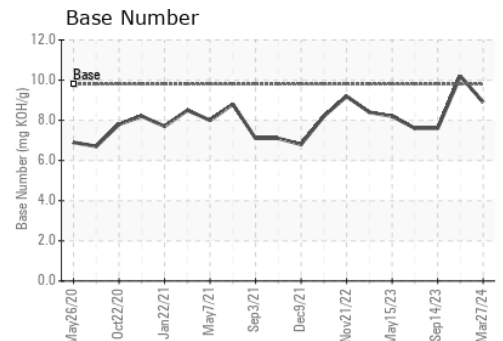
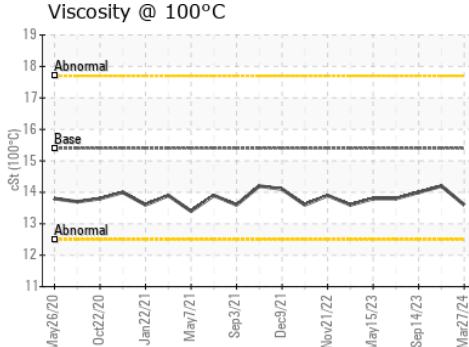
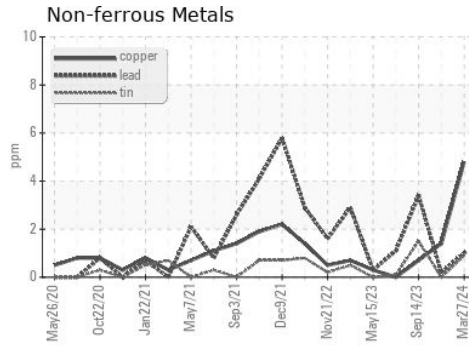
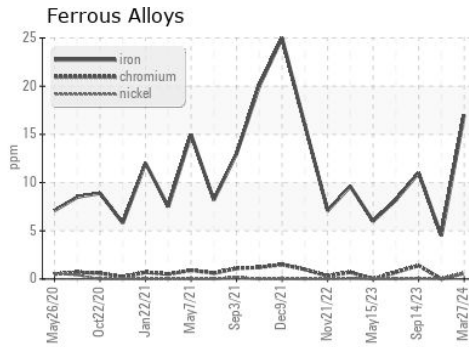
OIL ANALYSIS REPORT



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	13.6	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0058057
 Lab Number : 06131646
 Unique Number : 10951111
 Test Package : FLEET

Received : 28 Mar 2024
 Tested : 28 Mar 2024
 Diagnosed : 02 Apr 2024 - Don Baldrige

GFL Environmental - 657 - Charlottesville Hauling
 5498 Richmond Road
 Troy, VA
 US 22974
 Contact: Brian Ulickas
 bulickas@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)

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