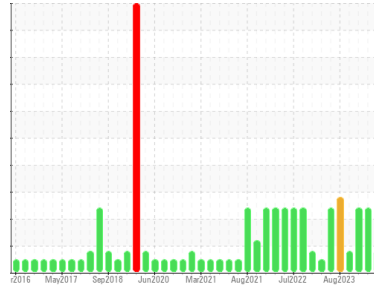




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
FREIGHTLINER 10616e
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (6 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	GFL0087478	GFL0087497	GFL0087506
Sample Date	Client Info	19 Jan 2024	30 Nov 2023	17 Nov 2023
Machine Age	hrs	6064	5926	5862
Oil Age	hrs	138	274	210
Oil Changed	Client Info	N/A	Not Changd	Changed
Sample Status		MARGINAL	SEVERE	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
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 >90	2	9	15
Chromium	ppm ASTM D5185m >20	<1	<1	3
Nickel	ppm ASTM D5185m >2	0	0	0
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	2	2	2
Lead	ppm ASTM D5185m >40	<1	0	<1
Copper	ppm ASTM D5185m >330	0	<1	<1
Tin	ppm ASTM D5185m >15	0	0	<1
Vanadium	ppm ASTM D5185m	<1	<1	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	5	15	17
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	56	54	59
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	928	755	879
Calcium	ppm ASTM D5185m 1070	1014	993	1079
Phosphorus	ppm ASTM D5185m 1150	1021	869	995
Zinc	ppm ASTM D5185m 1270	1240	1005	1195
Sulfur	ppm ASTM D5185m 2060	3282	2628	3048

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	5	9
Sodium	ppm ASTM D5185m	<1	2	1
Potassium	ppm ASTM D5185m >20	2	0	1
Fuel	% ASTM D3524 >3.0	▲ 1.9	◆ 7.5	◆ 6.6

INFRA-RED

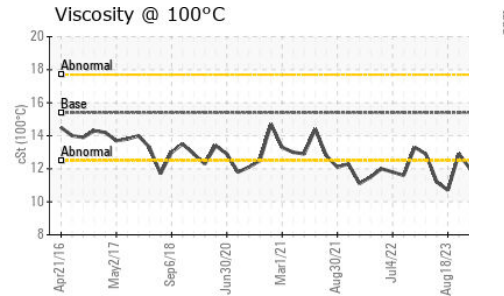
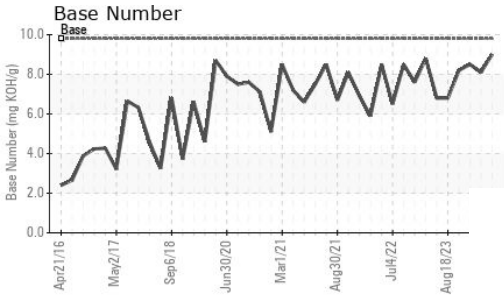
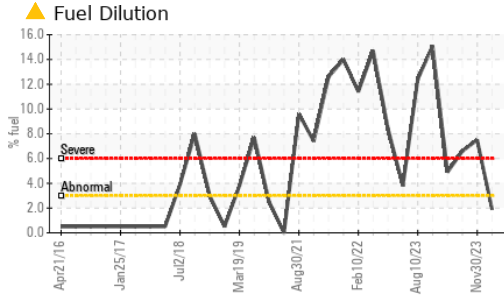
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.1	0.2	0.2
Nitration	Abs/cm *ASTM D7624 >20	4.8	6.6	6.7
Sulfation	Abs/.1mm *ASTM D7415 >30	17.2	17.9	18.0

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.0	13.9	14.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	9.0	8.1	8.5



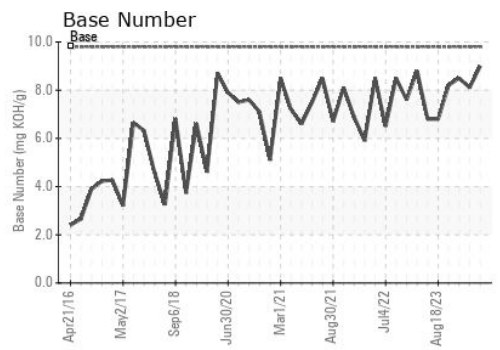
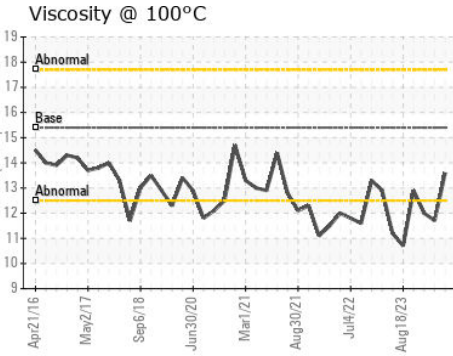
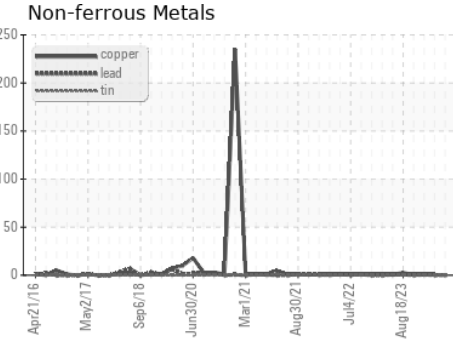
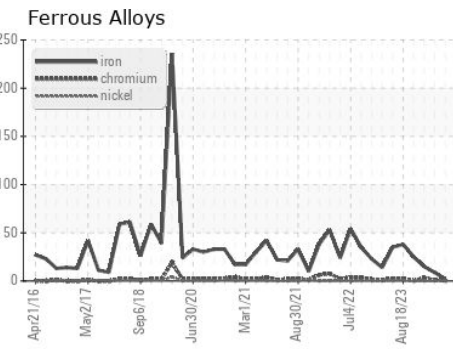
OIL ANALYSIS REPORT



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	LIGHT	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	▲ 11.7 ▲ 12.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087478 **Received** : 22 Jan 2024
Lab Number : **06066401** **Diagnosed** : 24 Jan 2024
Unique Number : 10843078 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 331 - Columbus
 180 Ada Moore Rd
 Columbus, NC
 US 28722
 Contact: Matt Segars
 matt.segars@gflenv.com
 T: (800)207-6618
 F: (252)617-2494

Certificate L2367
 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)