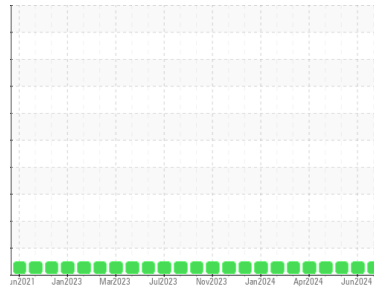




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
920018-192568
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination 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		GFL0115770	GFL0115794	GFL0115791
Sample Date	Client Info		18 Jun 2024	11 Jun 2024	31 May 2024
Machine Age	hrs	Client Info	9535	9496	9405
Oil Age	hrs	Client Info	392	353	262
Oil Changed	Client Info		N/A	N/A	Not Changd
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	6	14	18
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	<1	0	<1
Titanium	ppm	ASTM D5185m >2	<1	0	<1
Silver	ppm	ASTM D5185m >2	<1	0	<1
Aluminum	ppm	ASTM D5185m >20	3	4	7
Lead	ppm	ASTM D5185m >40	1	<1	1
Copper	ppm	ASTM D5185m >330	1	2	124
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 151	23	17	21
Barium	ppm	ASTM D5185m 0.4	1	0	0
Molybdenum	ppm	ASTM D5185m 250	74	70	81
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 0	821	830	874
Calcium	ppm	ASTM D5185m 2046	1106	1079	1122
Phosphorus	ppm	ASTM D5185m 1043	910	945	821
Zinc	ppm	ASTM D5185m 943	1095	1128	1106
Sulfur	ppm	ASTM D5185m 5012	2812	3254	2610

CONTAMINANTS

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

INFRA-RED

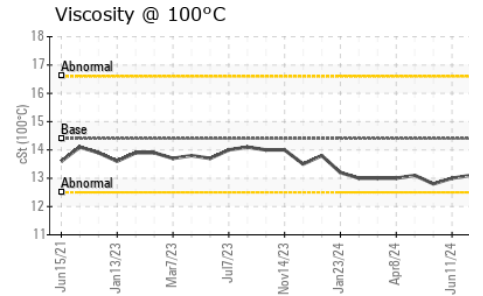
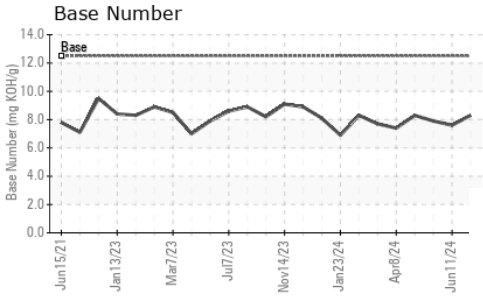
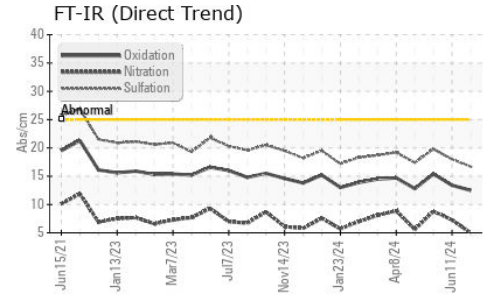
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.2	0.5	0.6
Nitration	Abs/cm	*ASTM D7624 >20	5.0	7.3	8.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	16.7	18.0	19.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.5	13.4	15.4
Base Number (BN)	mg KOH/g	ASTM D2896 12.5	8.3	7.6	7.9



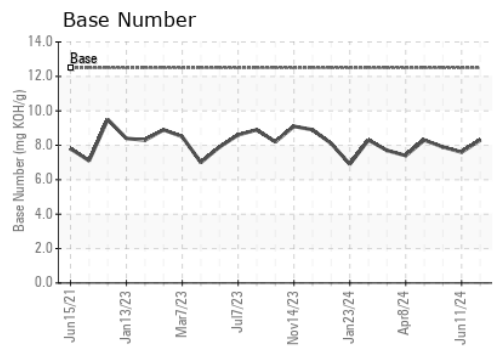
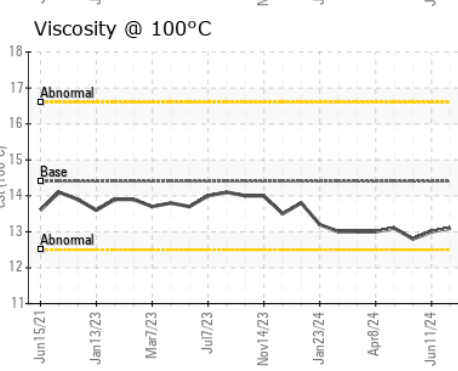
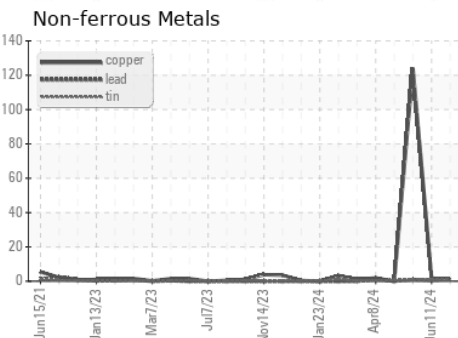
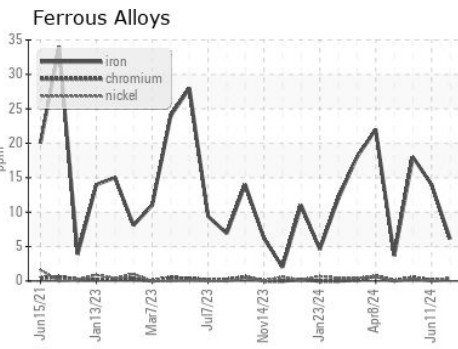
OIL ANALYSIS REPORT



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	14.4	13.1	13.0	12.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115770 **Received** : 24 Jun 2024
Lab Number : **06217811** **Tested** : 25 Jun 2024
Unique Number : 11096008 **Diagnosed** : 25 Jun 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 180 - Tuscaloosa Hauling
 4701 12TH ST NE
 Tuscaloosa, AL 35404
 Contact: FREDERICK ROGERS
 fred.rogers@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)