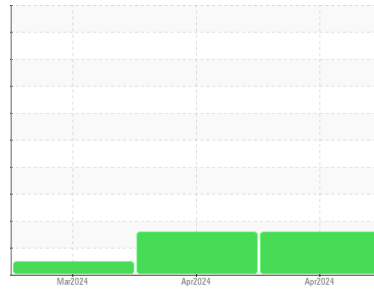




OIL ANALYSIS REPORT

Machine Id
814034
 Component
Diesel Engine
 Fluid
 {not provided} (--- GAL)

Sample Rating Trend



DIRT



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

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	GFL0102949	GFL0102988	GFL0102967
Sample Date	Client Info	18 Apr 2024	02 Apr 2024	04 Mar 2024
Machine Age	hrs	493	347	145
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	NORMAL

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 >120	40	27	19
Chromium	ppm ASTM D5185m >20	2	<1	0
Nickel	ppm ASTM D5185m >5	7	5	3
Titanium	ppm ASTM D5185m >2	<1	<1	0
Silver	ppm ASTM D5185m >2	<1	<1	0
Aluminum	ppm ASTM D5185m >20	8	7	6
Lead	ppm ASTM D5185m >40	<1	0	0
Copper	ppm ASTM D5185m >330	195	69	2
Tin	ppm ASTM D5185m >15	3	2	2
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	241	294	393
Barium	ppm ASTM D5185m	0	0	2
Molybdenum	ppm ASTM D5185m	137	122	120
Manganese	ppm ASTM D5185m	5	4	2
Magnesium	ppm ASTM D5185m	697	676	719
Calcium	ppm ASTM D5185m	1492	1432	1362
Phosphorus	ppm ASTM D5185m	728	699	700
Zinc	ppm ASTM D5185m	836	807	797
Sulfur	ppm ASTM D5185m	2506	2618	2179

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ 85	▲ 74	72
Sodium	ppm ASTM D5185m	2	3	<1
Potassium	ppm ASTM D5185m >20	11	6	4
Fuel	% ASTM D3524 >3.0	<1.0	<1.0	0.2

INFRA-RED

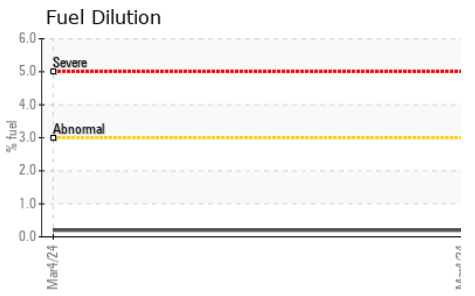
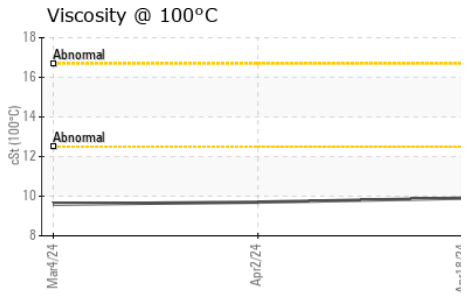
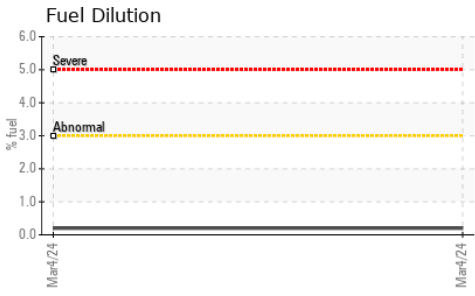
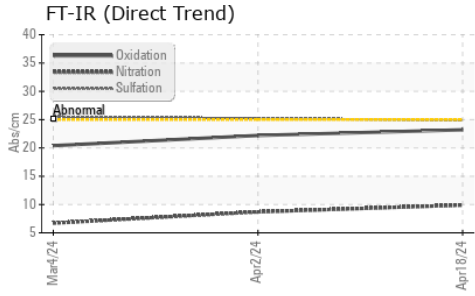
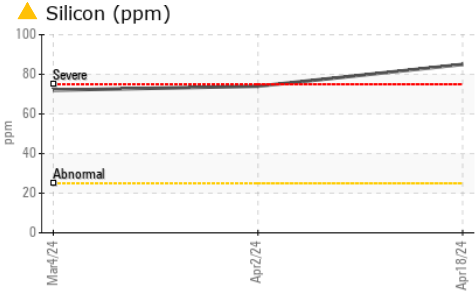
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.3	0.2	0.1
Nitration	Abs/cm *ASTM D7624 >20	9.9	8.7	6.7
Sulfation	Abs/.1mm *ASTM D7415 >30	24.9	25.2	25.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	23.2	22.2	20.4
Base Number (BN)	mg KOH/g ASTM D2896	7.7	8.7	9.4



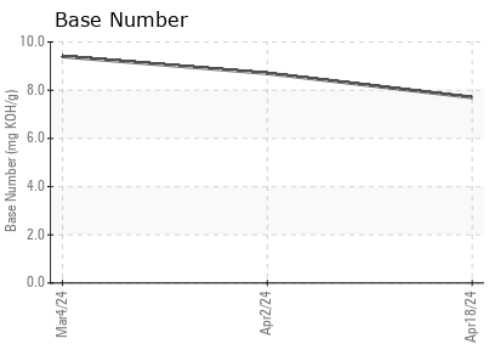
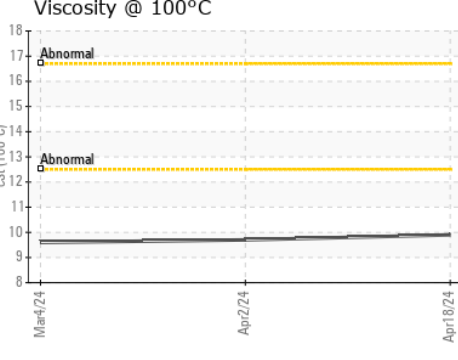
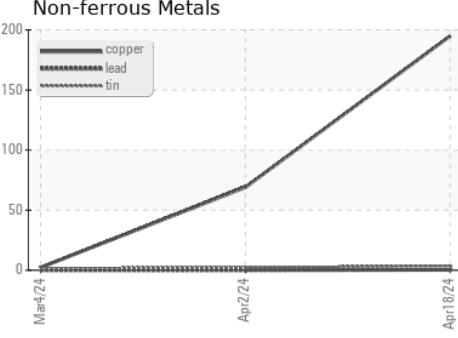
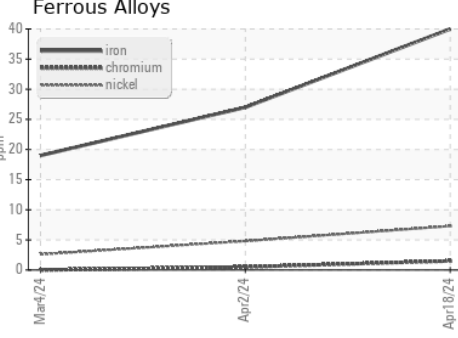
OIL ANALYSIS REPORT



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	9.9	9.7	9.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102949 **Received** : 19 Apr 2024
Lab Number : **06155141** **Tested** : 24 Apr 2024
Unique Number : 10990564 **Diagnosed** : 24 Apr 2024 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution)

GFL Environmental - 816 - WCA of South Arkansas
 3083 Smackover Hwy
 El Dorado, AR
 US 71730
 Contact: Mike Howell
 mike.howell@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)