



OIL ANALYSIS REPORT

Sample Rating Trend

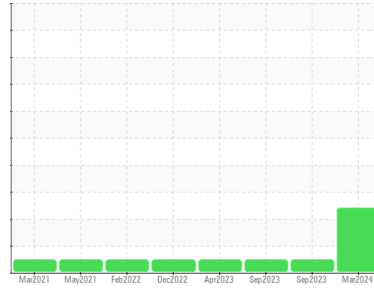
GLYCOL



Machine Id
528009-1133

Component
Diesel Engine

Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0096232	GFL0064413	GFL0055611
Sample Date	Client Info		07 Mar 2024	27 Sep 2023	11 Sep 2023
Machine Age	hrs	Client Info	14364	13675	13589
Oil Age	hrs	Client Info	0	612	512
Oil Changed	Client Info		N/A	Changed	Not 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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	42	61	59
Chromium	ppm	ASTM D5185m >20	3	7	9
Nickel	ppm	ASTM D5185m >4	0	0	<1
Titanium	ppm	ASTM D5185m	9	4	5
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	4	4	5
Lead	ppm	ASTM D5185m >40	29	25	25
Copper	ppm	ASTM D5185m >330	1	2	2
Tin	ppm	ASTM D5185m >15	<1	0	2
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	25	50	71
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	93	90	99
Manganese	ppm	ASTM D5185m	<1	<1	1
Magnesium	ppm	ASTM D5185m	757	613	717
Calcium	ppm	ASTM D5185m	1678	1463	1756
Phosphorus	ppm	ASTM D5185m 760	792	735	793
Zinc	ppm	ASTM D5185m 830	922	792	910
Sulfur	ppm	ASTM D5185m 2770	3254	2820	3799

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	7	8
Sodium	ppm	ASTM D5185m	▲ 164	15	17
Potassium	ppm	ASTM D5185m >20	▲ 20	4	7
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

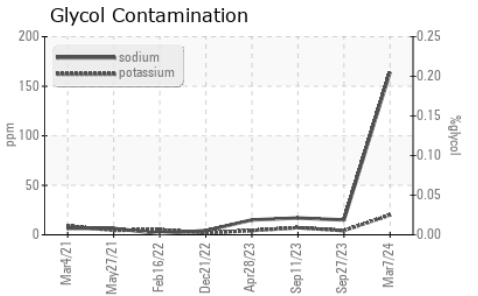
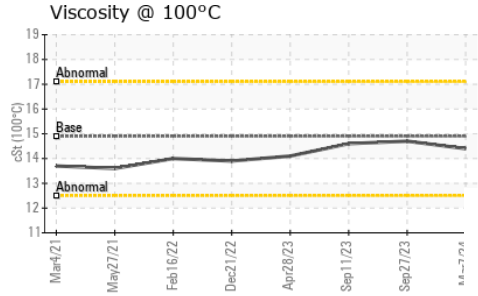
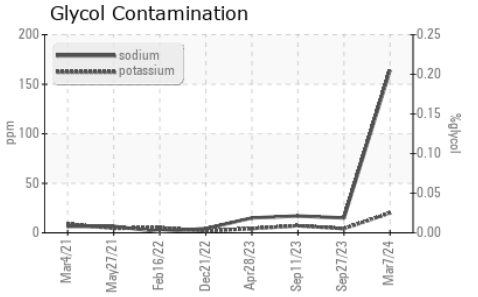
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	0.9	0.9
Nitration	Abs/cm	*ASTM D7624 >20	12.8	11.6	11.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	26.7	27.8	27.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.5	24.2	23.6
Base Number (BN)	mg KOH/g	ASTM D2896 10.7	5.7	5.5	6.1



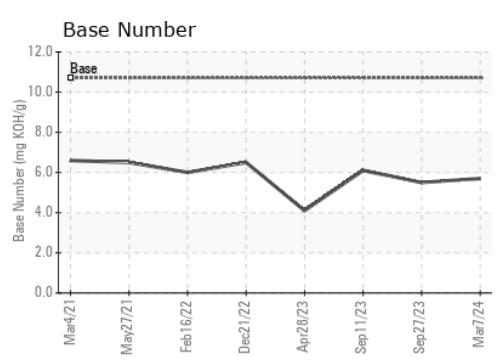
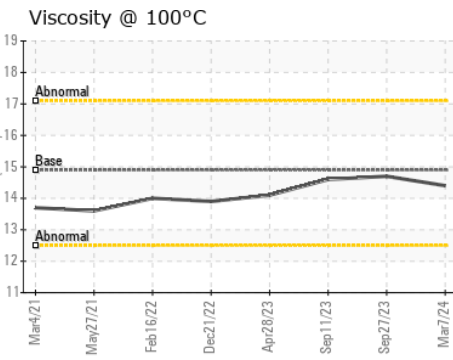
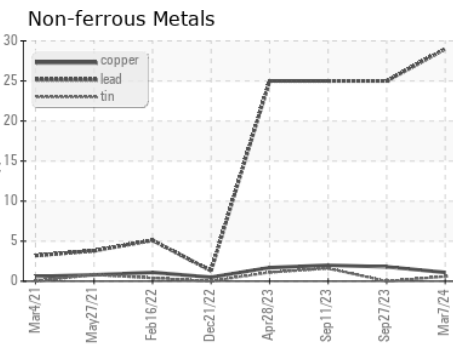
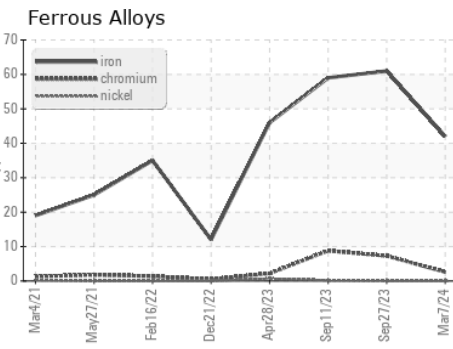
OIL ANALYSIS REPORT



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	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	14.9	14.4	14.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096232 **Received** : 12 Mar 2024
Lab Number : 06116375 **Tested** : 14 Mar 2024
Unique Number : 10925208 **Diagnosed** : 14 Mar 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 624 - Elmira Hauling
 10164 M-32
 Elmira, MI
 US 49730
 Contact: KEITH CAMPBELL
 kcampbell@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)