



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
ABNORMAL
NORMAL



Area
(YA152758) GFL035
Machine Id
12069
Component
Diesel Engine
Fluid
CHEVRON DELO 400 LE 15W40 (32 QTS)

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0116512	GFL0085179	GFL0102311
Sample Date		Client Info		22 May 2024	23 Jan 2024	04 Jan 2024
Machine Age	hrs	Client Info		0	0	8469
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		0	0	600
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	38	13	68
Chromium	ppm	ASTM D5185m	>20	1	<1	3
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	7	4	10
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	52	0	1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

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

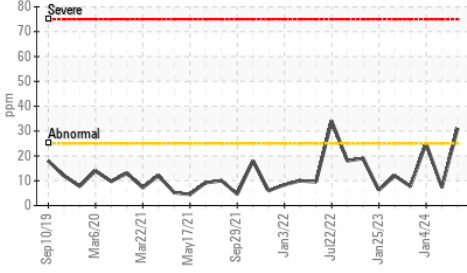
Silicon	ppm	ASTM D5185m	>25	31	7	25
Potassium	ppm	ASTM D5185m	>20	12	4	6
Fuel	%	ASTM D3524	>3.0	1.3	4.5	9.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.4	0.3	0.8
Nitration	Abs/cm	*ASTM D7624	>20	8.2	7.8	15.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	18.9	27.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

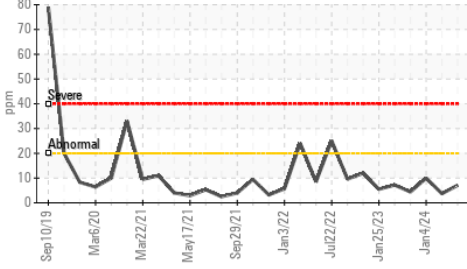
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		8	11	41
Boron	ppm	ASTM D5185m		31	3	4
Barium	ppm	ASTM D5185m		5	0	0
Molybdenum	ppm	ASTM D5185m		34	55	54
Manganese	ppm	ASTM D5185m		3	<1	<1
Magnesium	ppm	ASTM D5185m		440	872	814
Calcium	ppm	ASTM D5185m		2069	994	916
Phosphorus	ppm	ASTM D5185m	1200	789	1001	908
Zinc	ppm	ASTM D5185m	1300	945	1172	1071
Sulfur	ppm	ASTM D5185m	3200	2981	2876	2291
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.1	15.5	30.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.8	8.0	2.6
Visc @ 100°C	cSt	ASTM D445	15.7	13.3	12.8	11.9

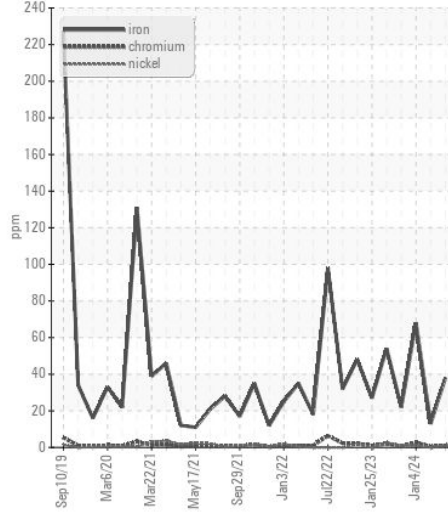
▲ Silicon (ppm)



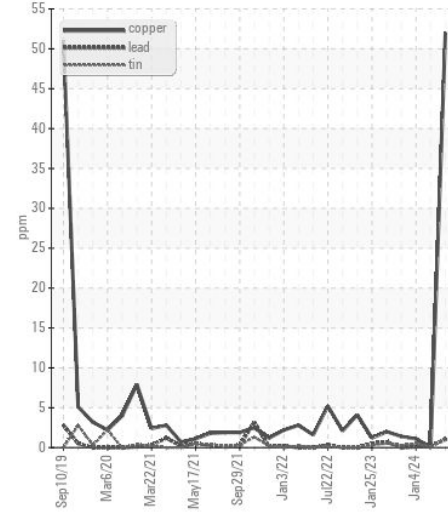
● Aluminum (ppm)



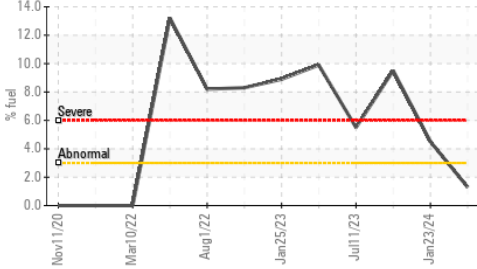
Ferrous Alloys



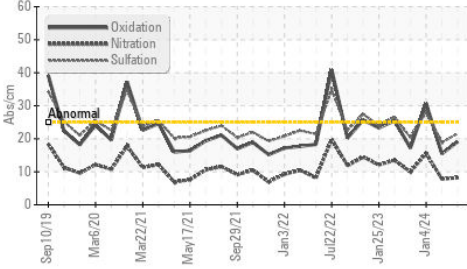
Non-ferrous Metals



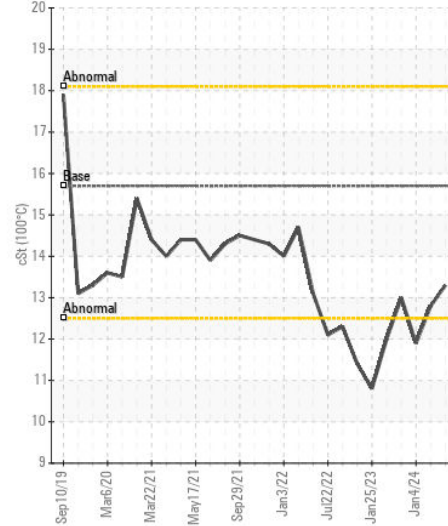
Fuel Dilution



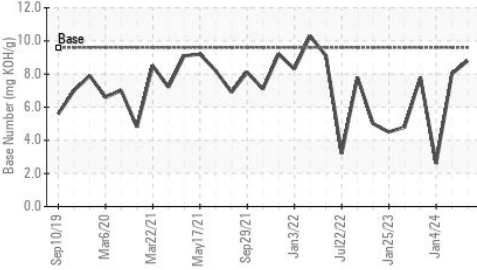
FT-IR (Direct Trend)



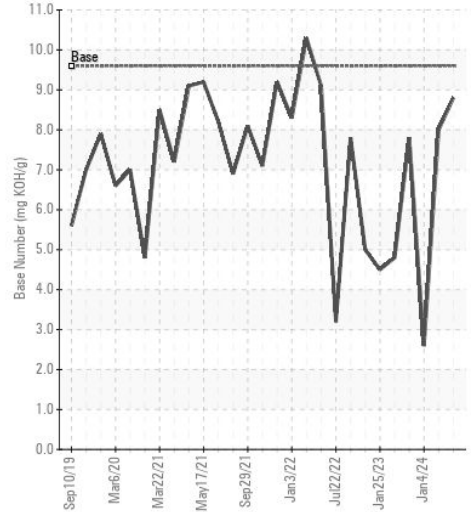
Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0116512 Received : 24 May 2024
 Lab Number : 06191447 Tested : 30 May 2024
 Unique Number : 11048199 Diagnosed : 30 May 2024 - Sean Felton
 Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 035 - Greensboro
 1236 Elon Place
 High Point, NC
 US 27263
 Contact: JORGE COSTA
 jorge.costa@gflenv.com
 T: (336)668-3712
 F:

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)