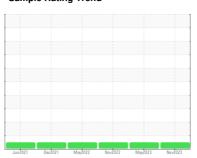


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 731018
Component

Natural Gas Engine

CASTROL 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAL)		Jun2021	Dec2021 May2022	Nov2022 May2023	Nov2023	
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0100762	GFL0079562	GFL0041626
Sample Date		Client Info		22 Nov 2023	18 May 2023	14 Nov 2022
Machine Age	kms	Client Info		109113	91886	4534
Oil Age	kms	Client Info		0	0	1200
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA [*]	TION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR META	LS	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>50	9	15	16
Chromium	ppm	ASTM D5185(m)	>4	<1	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Γitanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>9	2	2	4
Lead	ppm	ASTM D5185(m)	>30	2	3	4
Copper	ppm	ASTM D5185(m)	>35	<1	2	2
Tin	ppm	ASTM D5185(m)	>4	<1	1	1
Antimony	ppm	ASTM D5185(m)		0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		7	8	6
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		53	61	55
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		541	873	616
Calcium	ppm	ASTM D5185(m)		1694	1337	1686
Phosphorus	ppm	ASTM D5185(m)		688	928	796
Zinc	ppm	ASTM D5185(m)		937	1103	974
Sulfur	ppm	ASTM D5185(m)		2028	2415	2093
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINAL	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	3	4	6
Sodium	ppm	ASTM D5185(m)	>406	2	2	3
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	11.8	11.1	12.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.5	25.4	26.6
FLUID DEGRA	NOITAD	method	limit/base	current	history1	history2
Ovidation	Abo/1	ACTM D7414*	. 05	00.0	10.4	01 5

Oxidation

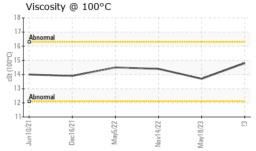
21.5

19.4

20.2



OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water scalar		>0.1	NEG	NEG	NEG
Free Water scalar	Visual*		NEG	NEG	NEG
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C cSt	ASTM D7279(m)		14.8	13.7	14.4
GRAPHS					
Iron (ppm)		60	Lead (ppm)		
70		50	Severe		
60		40			
E 50 Abnormal		튵30	Abnormal		
30 -		20			
20		10			
0/21	1,723	0 +	12/0	- 1727	1/23
Jun10/21 Dec16/21	May 18/23	Nov22/23	Jun10/21	May5/22 Nov14/22	May18/23 Nov22/23
Aluminum (ppm)			Chromium (p	pm)	
Severe		6	Severe		
12 - Abnormal		5	Ab		
Abnormal B	·	E 4	Abnormal	1	-
6		2			
2		1			
22 21	- 23	0 53	721	22	23
Jun10/21	May18/23	Nov22/23	Jun10/21	May5/22 Nov14/22	May18/23 Nov22/23
Copper (ppm)		200	Silicon (ppm)		
70 Severe		200	Severe		
60		150	-		
50 Abnormal		틀100	Abnormal		
30+	1				
20		50			
10/21	53	0	10/21	- 22	23 23
Jun10/21	May18/23	Nov22/23	Jun10/2	May5/22 Nov14/22	May18/23 Nov22/23
Viscosity @ 100°C	_		Additives		_
18 7		1800	calcium		/
Abnormal 16 -		1600	zinc		\/
(2-15 (0-15) 14		E1200			~
	\	1000			
Abnormal		800	NAME AND DESCRIPTION OF THE PARTY OF THE PAR	Annual Control of the	
11		600	gen gen	C. C	
Jun10/21 Dec16/21 May5/22	May18/23	Nov22/23	Jun10/21	May5/22	May18/23 Nov22/23
5 □ ≥	M	ž	5 0	2 2	N _S



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5683740 Test Package : MOB 1

: 02598660

: GFL0100762

Received : 24 Nov 2023 Diagnosed

: 24 Nov 2023 Diagnostician : Kevin Marson

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 277 - Niagara Regional C/O Metro Truck Niagara Inc., 411 Glendale Avenue St. Catharines, ON

CA L2P 3Y1 Contact: Kelly Bremner kbremner@gflenv.com T: (437)235-6849

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.