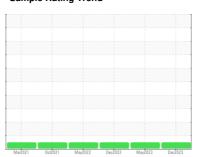


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
731027
Component
Natural Gas Engine
Fluid
CASTROL 15W40 (---

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.

iAL)		Mw2021						
SAMPLE INFO	RMATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		GFL0100759	GFL0041636	GFL004162		
Sample Date		Client Info		01 Dec 2023	02 May 2023	13 Dec 2022		
Machine Age	kms	Client Info		85120	70772	44389		
Oil Age	kms	Client Info		0	0	29249		
Oil Changed		Client Info		Changed	Changed	N/A		
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	17	10	14		
Chromium	ppm	ASTM D5185(m)	>4	1	<1	<1		
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1		
Titanium	ppm	ASTM D5185(m)		0	<1	<1		
Silver	ppm	ASTM D5185(m)	>3	<1	0	0		
Aluminum	ppm	ASTM D5185(m)	>9	4	2	2		
Lead	ppm	ASTM D5185(m)	>30	8	2	9		
Copper	ppm	ASTM D5185(m)	>35	2	1	2		
Tin	ppm	ASTM D5185(m)	>4	<1	<1	1		
Antimony	ppm	ASTM D5185(m)		0	0	0		
/anadium	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)		6	8	6		
Barium	ppm	ASTM D5185(m)		<1	0	0		
Molybdenum	ppm	ASTM D5185(m)		54	53	57		
Manganese	ppm	ASTM D5185(m)		<1	<1	<1		
Magnesium	ppm	ASTM D5185(m)		553	567	612		
Calcium	ppm	ASTM D5185(m)		1610	1626	1675		
Phosphorus	ppm	ASTM D5185(m)		718	753	818		
Zinc	ppm	ASTM D5185(m)		937	931	976		
Sulfur	ppm	ASTM D5185(m)		1954	2074	2147		
Lithium	ppm	ASTM D5185(m)		<1	<1	<1		
CONTAMINA	NTS	method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>+100	4	3	5		
Sodium	ppm	ASTM D5185(m)	>406	3	2	3		
Potassium	ppm	ASTM D5185(m)	>20	8	0	0		
INFRA-RED		method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*		0	0	0		
Vitration	Abs/cm	ASTM D7624*	>20	12.6	11.3	12.8		
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.4	24.3	27.4		
FLUID DEGRA	ADATION	method	limit/base	current	history1	history2		

Oxidation

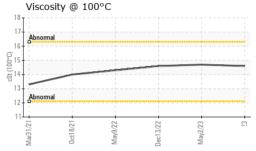
22.2

19.5

22.9



OIL ANALYSIS REPORT



VISUAL		method	limit/b	oase	current	: ł	nistory1	histo	ry2
Emulsified Water Free Water	scalar scalar	Visual*	>0.1		NEG NEG	NE NE		NEG NEG	
FLUID PROPI	ERTIES	method	limit/k	oase	current	: ł	nistory1	histo	ry2
Visc @ 100°C	cSt	ASTM D7279(m)			14.6	14	.7	14.6	
GRAPHS									
Iron (ppm)	· · · · · · · · · · · · · · · · · · ·			60 -	ead (ppn	n)			
		1		50 -	Severe				
Abnormal				40-	Abnomal				
				200	Abnormal				
				20 -					
	2	3		ياه		2	2	3	67
0ct18/21	May9/22 Dec13/22	May2/23	Dec1/23	0.10	Oct18/21	May9/22	Dec13/22	May2/23	Dec1/23
Aluminum (ppm)				7 _T -	Chromium	(ppm)			
Severe		+			Severe				
Abnormal				5-	Abnormal				
				E 4 1					
				2 -					
				0					
Oct18/21	May9/22 Dec13/22	May2/23	Dec1/23	10101	oct18/21	May9/22 -	Dec13/22	May2/23	Dec1/23
Copper (ppm)		2			Silicon (pp		0	~	
Severe		i i		200	Severe			 	
				150-					
Abnormal				튭100-	Abnormal	!			
				50-					
				0					
Mar31/21	ay9/22 -	ay2/23	Dec1/23	1 10 10 M	#18/21	May9/22	:13/22	May2/23	Dec1/23 -
iscosity @ 100°	C May	May	О		Additives	Σ	Decl	Σ	О
]				1800	calci	um]			
Abnormal				1600 -	phos	phorus			
				튑1200					
		i		1000	Name of Control of Con			****************	
Abnormal				800 -	· · · · · · · · · · · · · · · · · · ·	to a tenderal tenderal house the	AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO OF THE PERSON NAMED IN COLUMN TO PERSON NAMED IN COLUMN TO P	THE RESIDENCE OF THE SAME	· ·
Mar31/21-	May9/22 +	May2/23	Dec1/23	600 L	Oct18/21-	May9/22	Dec13/22 -	May2/23	Dec1/23
Mar31/2 0ct18/2	May9/22 Dec13/22	May	Dec	M010	Octi	Мау	Decl	May	Dec



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5685894 Test Package : MOB 1

: GFL0100759 : 02600814

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 277 - Niagara Regional Received : 05 Dec 2023 Diagnosed

: 06 Dec 2023 Diagnostician : Kevin Marson 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.