

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id
4601
Component
Diesel Engine
Fluid
NOT GIVEN (--- GAL)

`

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

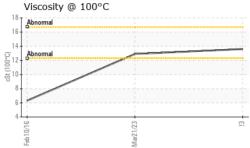
Fluid Condition

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

		Feb	2016	Mar2023 Aug20	23	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0071479	GFL0071489	PC396595
Sample Date		Client Info		29 Aug 2023	21 Mar 2023	10 Feb 2016
Machine Age	hrs	Client Info		290299	268902	42923
Oil Age	hrs	Client Info		0	0	4107
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	46	21	3
Chromium	ppm	ASTM D5185(m)	>20	1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	0
Titanium	ppm	ASTM D5185(m)		<1	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	12	4	0
Lead	ppm	ASTM D5185(m)	>40	1	0	<1
Copper	ppm	ASTM D5185(m)	>330	2	<1	2
Tin	ppm	ASTM D5185(m)	>15	<1	0	0
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)		10	4	2
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		61	61	<1
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		995	949	2
Calcium	ppm	ASTM D5185(m)		1037	1119	57
Phosphorus	ppm	ASTM D5185(m)		1005	1075	367
Zinc	ppm	ASTM D5185(m)		1200	1180	462
Sulfur	ppm	ASTM D5185(m)		2355	2553	831
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5	3	<1
Sodium	ppm	ASTM D5185(m)		9	5	1
Potassium	ppm	ASTM D5185(m)	>20	24	4	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	1	0.2	
Nitration	Abs/cm	ASTM D7624*	>20	11.2	8.4	
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.8	21.6	
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.4	15.6	



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
ELLUD DDODE	DTIES					
FLUID PROPE	RHES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	method ASTM D7279(m)	limit/base	current 13.6	history1 12.9	history2 6.3
			limit/base		, <u> </u>	•

VISC @ 100°C	CSI	A51W D7279(III)	13.6	12.9	0.3
GRAPHS					_
Iron (ppm)			Lead (ppm)		
250			90 Severe		
200 Severe			70-		
150			60 E 50		
Abnormal	-		Abnormal		
50			20 -		
			10		
0 1/8	1/23	9/23 -	01/91/0	1/23	9/23
Feb10/16	Mar21/23	Aug29/23	Feb10/16	Mar21/23	Aug29/23
Aluminum (ppm)		Chromium (ppm)	
45 Severe			45 40 Severe		
35			35		
30			E 25		
Abnormal					
15			10-		
5			5		
Feb10/16	Mar21/23 -	Aug29/23 -	Feb10/16	Mar21/23 -	.9/23
Feb	Mar2	Aug2	Feb1	Mar2	Aug29/23
Copper (ppm)			Silicon (ppm)	
Severe 350 Abnormal	·		70 Severe		
300			60		
250			50 + E 40 +		
150			30 - Abnormal		
100			20		
50			10		
Feb10/16	Mar21/23	Aug29/23	Feb10/16	Mar21/23	Aug29/23
		Aug		Ma	Aug
Viscosity @ 100	,С 		Soot %		
Abnormal			5.0 - Severe		-
Abnormal	<u> </u>		4.0		
Abnormal			Abnormal		
₹ 10 8			2.0		
6			1.0-		
4			0.0		
Feb10/16	Mar21/23	Aug29/23	Mar21/23		Aug29/23
团	Ma	Aug	₹		Aug



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5641929 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : GFL0071479 : 02580864

Received Diagnosed

: 07 Sep 2023 : 07 Sep 2023

Diagnostician : Wes Davis

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.

GFL Environmental - 216M

2475 Beryl Drive Oakville, ON CA L6J 7X4

Contact: Matthew Gunness mgunness@gflenv.com

T: F: