

OIL ANALYSIS REPORT

(YA171054) 932030

Natural Gas Engine

{not provided} (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

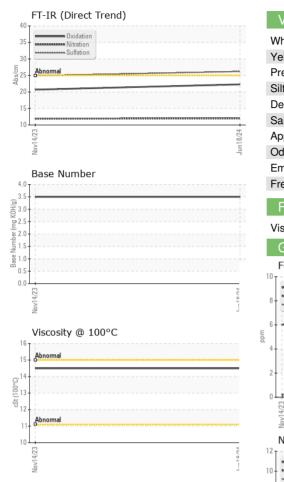
Fluid Condition

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

			Nov2023	Jun2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0123417	GFL0082487	
Sample Date		Client Info		18 Jun 2024	14 Nov 2023	
Machine Age	hrs	Client Info		1212	1212	
Oil Age	hrs	Client Info		1212	1212	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>50	10	6	
Chromium	ppm	ASTM D5185m	>4	<1	<1	
Nickel	ppm	ASTM D5185m	>2	0	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>9	4	2	
_ead	ppm	ASTM D5185m	>30	12	2	
Copper	ppm	ASTM D5185m	>35	4	2	
Tin	ppm	ASTM D5185m	>4	0	1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		6	3	
Barium	ppm	ASTM D5185m		<1	<1	
Molybdenum	le le	710 1111 20 100111		~!	< 1	
viorybaeriarii	ppm	ASTM D5185m		56	55	
•						
Manganese	ppm	ASTM D5185m		56	55	
Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m		56 <1	55 1	
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		56 <1 619	55 1 585	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		56 <1 619 1950 858 1107	55 1 585 1572	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		56 <1 619 1950 858	55 1 585 1572 740	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	56 <1 619 1950 858 1107	55 1 585 1572 740 965	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		56 <1 619 1950 858 1107 3013	55 1 585 1572 740 965 2343	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		56 <1 619 1950 858 1107 3013	55 1 585 1572 740 965 2343 history1 12 6	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	>+100	56 <1 619 1950 858 1107 3013 current	55 1 585 1572 740 965 2343 history1	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>+100	56 <1 619 1950 858 1107 3013 current 7 10	55 1 585 1572 740 965 2343 history1 12 6	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>+100 >20	56 <1 619 1950 858 1107 3013 current 7 10 8	55 1 585 1572 740 965 2343 history1 12 6	history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>+100 >20 limit/base	56 <1 619 1950 858 1107 3013 current 7 10 8 current	55 1 585 1572 740 965 2343 history1 12 6 5	history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	>+100 >20 limit/base >20	56 <1 619 1950 858 1107 3013 current 7 10 8 current 0	55 1 585 1572 740 965 2343 history1 12 6 5	history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	>+100 >20 limit/base >20	56 <1 619 1950 858 1107 3013 current 7 10 8 current 0 12.0	55 1 585 1572 740 965 2343 history1 12 6 5 history1 0 11.9	history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	>+100 >20 limit/base >20 >30	56 <1 619 1950 858 1107 3013 current 7 10 8 current 0 12.0 26.2	55 1 585 1572 740 965 2343 history1 12 6 5 history1 0 11.9 24.9	history2 history2



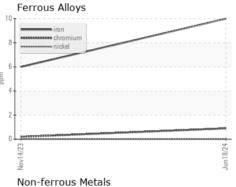
OIL ANALYSIS REPORT

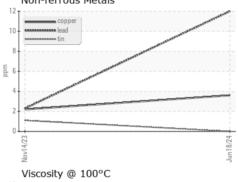


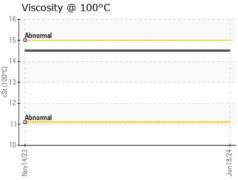
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

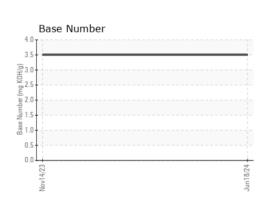
FLUID PROP	ERITES	method	limit/base		nistory1	history2
Visc @ 100°C	cSt	ASTM D445		14.5	14.5	

GRAPHS













Certificate 12367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Lab Number : 06215563

Test Package : FLEET

: GFL0123417 Unique Number : 11088427

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received : 20 Jun 2024 **Tested** : 21 Jun 2024 Diagnosed

: 21 Jun 2024 - Wes Davis

GFL Environmental - 007 - Brunswick

2809 Galloway Road Bolivia, NC

US 28422 Contact: DONALD CRAVEN dcraven@gflenv.com

Submitted By: DONALD CRAVEN

* - 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)

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