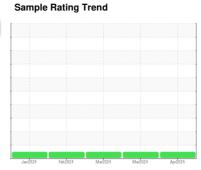


# **OIL ANALYSIS REPORT**



(48023UA) 934036 Natural Gas Engine {not provided} (--- GAL





## 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.

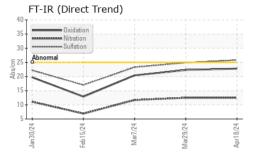
### Fluid Condition

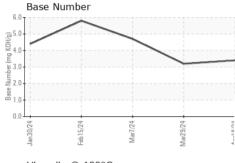
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

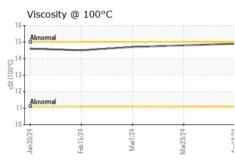
)		Jan 2024	Feb 2024 1	MdIZUZT WdIZUZT	Apr2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0116623	GFL0111873	GFL0111859
Sample Date		Client Info		18 Apr 2024	29 Mar 2024	07 Mar 2024
Machine Age	hrs	Client Info		1061	906	745
Oil Age	hrs	Client Info		1061	906	745
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	32	31	33
Chromium	ppm	ASTM D5185m	>5	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	0	<1	1
Titanium	ppm	ASTM D5185m	>5	0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	11	9	9
Lead	ppm	ASTM D5185m	>40	0	<1	1
Copper	ppm	ASTM D5185m	>150	13	12	13
Tin	ppm	ASTM D5185m	>4	1	1	2
Vanadium	ppm	ASTM D5185m		0	<1	_ <1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		6	4	13
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		56	56	55
Manganese	ppm	ASTM D5185m		11	11	12
Magnesium	ppm	ASTM D5185m				
Calcium				720	717	713
Calciulii	ppm	ASTM D5185m		720 1453	717 1443	713 1371
	ppm ppm					
Phosphorus		ASTM D5185m		1453	1443	1371
Phosphorus Zinc	ppm	ASTM D5185m ASTM D5185m		1453 728	1443 711	1371 756
Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	1453 728 961	1443 711 955	1371 756 972
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		1453 728 961 2414	1443 711 955 2645	1371 756 972 2536
Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method		1453 728 961 2414 current	1443 711 955 2645 history1	1371 756 972 2536 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	>25	1453 728 961 2414 current	1443 711 955 2645 history1	1371 756 972 2536 history2 26
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	>25	1453 728 961 2414 current 24	1443 711 955 2645 history1 25	1371 756 972 2536 history2 26 5
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	1453 728 961 2414 current 24 3 23	1443 711 955 2645 history1 25 5 23	1371 756 972 2536 history2 26 5 24
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base	1453 728 961 2414 current 24 3 23	1443 711 955 2645 history1 25 5 23	1371 756 972 2536 history2 26 5 24 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm TS ppm ppm ppm	ASTM D5185m	>25 >20 limit/base >20	1453 728 961 2414 current 24 3 23 current 0.1	1443 711 955 2645 history1 25 5 23 history1	1371 756 972 2536 history2 26 5 24 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D7844 *ASTM D7624	>25 >20 limit/base >20	1453 728 961 2414 current 24 3 23 current 0.1 12.5	1443 711 955 2645 history1 25 5 23 history1 0 12.5	1371 756 972 2536 history2 26 5 24 history2 0 11.7
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 limit/base >20 >30 limit/base	1453 728 961 2414 current 24 3 23 current 0.1 12.5 25.8	1443 711 955 2645 history1 25 5 23 history1 0 12.5 24.9	1371 756 972 2536 history2 26 5 24 history2 0 11.7 23.3



# **OIL ANALYSIS REPORT**



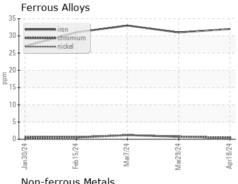


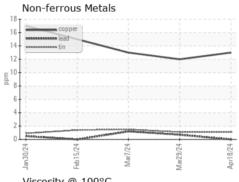


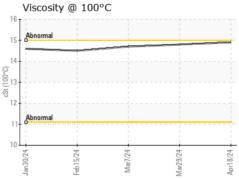
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

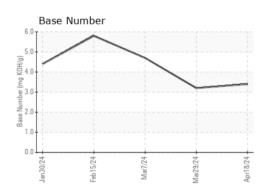
FLUID PROP	ERHES	method			history2
Visc @ 100°C	cSt	ASTM D445	14.9	14.8	14.7

## **GRAPHS**













Certificate 12367

Laboratory Sample No.

: GFL0116623 Lab Number : 06158942

Unique Number : 10994365 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Apr 2024

**Tested** : 25 Apr 2024 Diagnosed : 25 Apr 2024 - Wes Davis

GFL Environmental - 652 - Fredericksburg Hauling

10954 Houser Drive Fredericksburg, VA US 22408

Contact: WILLIAM MILO wmilo@gflenv.com

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)

T:

F: