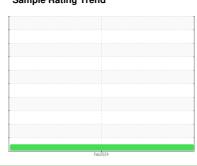


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **914036**

Component

Diesel 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

Fuel content negligible. There is no indication of any contamination in the oil.

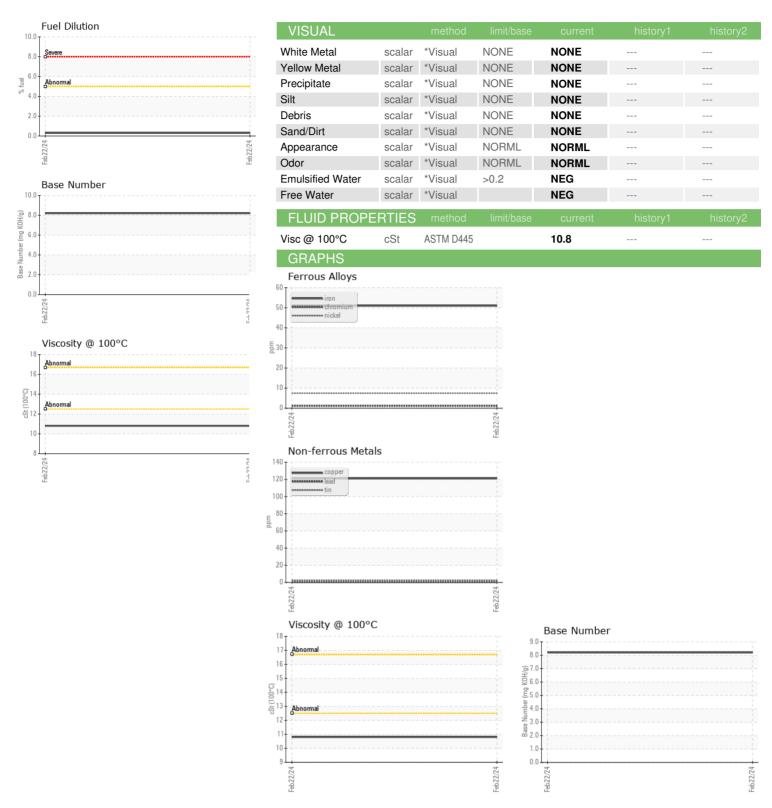
Fluid Condition

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

				Feb 2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0113033		
Sample Date		Client Info		22 Feb 2024		
Machine Age	hrs	Client Info		687		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	51		
Chromium	ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>4	8		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m		6		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	121		
Tin	ppm	ASTM D5185m	>15	2		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 163	history1	history2
	ppm		limit/base			
Boron Barium		ASTM D5185m	limit/base	163		
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	limit/base	163 0		
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	163 0 110		
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	163 0 110 3		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	163 0 110 3 730		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	163 0 110 3 730 1364		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	163 0 110 3 730 1364 678		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	163 0 110 3 730 1364 678 835		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		163 0 110 3 730 1364 678 835 2198		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	163 0 110 3 730 1364 678 835 2198 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	163 0 110 3 730 1364 678 835 2198 current	 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	limit/base >25	163 0 110 3 730 1364 678 835 2198 current 52 4	 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	limit/base >25 >20	163 0 110 3 730 1364 678 835 2198 current 52 4	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	limit/base >25 >20 >5	163 0 110 3 730 1364 678 835 2198 current 52 4 9 0.3	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	limit/base >25 >20 >5 limit/base >3	163 0 110 3 730 1364 678 835 2198 current 52 4 9 0.3	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	limit/base >25 >20 >5 limit/base >3	163 0 110 3 730 1364 678 835 2198 current 52 4 9 0.3 current	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D76185m	limit/base >25 >20 >5 limit/base >3 >20	163 0 110 3 730 1364 678 835 2198 current 52 4 9 0.3 current 0.7 9.1	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D76185m	limit/base >25	163 0 110 3 730 1364 678 835 2198 current 52 4 9 0.3 current 0.7 9.1 23.5	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m ASTM D76185m ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	163 0 110 3 730 1364 678 835 2198 current 52 4 9 0.3 current 0.7 9.1 23.5 current	history1 history1 history1	history2 history2 history2



OIL ANALYSIS REPORT





Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

: GFL0113033 Lab Number : 06111893 **Unique Number** : 10915390

Received **Tested** Diagnosed

Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

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.

: 12 Mar 2024 : 12 Mar 2024 - Jonathan Hester

: 07 Mar 2024

300 Raemisch Road Waunakee, WI US 53597 Contact: Ben Briggs

GFL Environmental - 924 - Madison HC

ben.briggs@gflenv.com T: (608)770-9196

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)