

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id FREIGHTLINER 125064-SW8504 Component Diesel Engine

SAMPLE INFORMATION method

# MOBIL DELVAC ELITE 15W40 (--- GAL)

DIAGNOSIS
Recommendation

Resample at the next service interval to monitor.

#### Wear

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.

SAMIFLE INFUN		method	iiiiii/base	current	nistory i	TIIStoryz
Sample Number		Client Info		GFL0111299	GFL0111348	GFL0095495
Sample Date		Client Info		12 Apr 2024	29 Jan 2024	05 Dec 2023
Machine Age	hrs	Client Info		20532	20001	19660
Oil Age	hrs	Client Info		0	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
•						
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	4	2	5
Chromium	ppm	ASTM D5185m		4	<1	<1
Nickel		ASTM D5185m		0	0	< 1
Titanium	ppm ppm	ASTM D5185m	>C	0	<1	<1
Silver		ASTM D5185m	. 2		0	0
Aluminum	ppm			0 4	4	4
	ppm	ASTM D5185m		-		
Lead	ppm		>30	<1	0	0
Copper	ppm	ASTM D5185m		2	<1	
Tin	ppm		>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 90	history1 114	history2 109
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	90	114	109
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	90 0	114 2	109 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	90 0 127	114 2 118	109 0 123
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	90 0 127 <1	114 2 118 0	109 0 123 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	90 0 127 <1 685	114 2 118 0 627	109 0 123 <1 637
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	90 0 127 <1 685 1239	114 2 118 0 627 1154	109 0 123 <1 637 1187
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	90 0 127 <1 685 1239 775	114 2 118 0 627 1154 686	109 0 123 <1 637 1187 644
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	limit/base	90 0 127 <1 685 1239 775 872	114 2 118 0 627 1154 686 767	109 0 123 <1 637 1187 644 796
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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	90 0 127 <1 685 1239 775 872 3893 current	114 2 118 0 627 1154 686 767 2970 history1	109 0 123 <1 637 1187 644 796 3619 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	90 0 127 <1 685 1239 775 872 3893 current 4	114 2 118 0 627 1154 686 767 2970 history1 5	109 0 123 <1 637 1187 644 796 3619 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >20	90 0 127 <1 685 1239 775 872 3893 current 4 2	114 2 118 0 627 1154 686 767 2970 history1	109 0 123 <1 637 1187 644 796 3619 history2 5 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >20 >20	90 0 127 <1 685 1239 775 872 3893 current 4 2 2	114 2 118 0 627 1154 686 767 2970 history1 5 2 2 0	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base	90 0 127 <1 685 1239 775 872 3893 current 4 2 2 2	114 2 118 0 627 1154 686 767 2970 history1 5 2 0 0 history1	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3	90 0 127 <1 685 1239 775 872 3893 current 4 2 2 current 0.2	114 2 118 0 627 1154 686 767 2970 history1 5 2 0 history1 0.2	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 <u>history2</u> 0.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20	90 0 127 <1 685 1239 775 872 3893 current 4 2 2 2 current 0.2 9.4	114 2 118 0 627 1154 686 767 2970 history1 5 2 2 0 history1 0.2 8.8	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 5 0 2 history2 0.2 9.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3	90 0 127 <1 685 1239 775 872 3893 current 4 2 2 current 0.2	114 2 118 0 627 1154 686 767 2970 history1 5 2 0 history1 0.2	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 <u>history2</u> 0.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20	90 0 127 <1 685 1239 775 872 3893 current 4 2 2 2 current 0.2 9.4	114 2 118 0 627 1154 686 767 2970 history1 5 2 2 0 history1 0.2 8.8	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 5 0 2 history2 0.2 9.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >20 >20 imit/base >3 >20 >30 >30	90 0 127 <1 685 1239 775 872 3893 current 4 2 2 2 current 0.2 9.4 17.8 current	114 2 118 0 627 1154 686 767 2970 history1 5 2 0 history1 0.2 8.8 17.3 history1	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 <u>history2</u> 0.2 9.2 17.8 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	Imit/base >20 >20 Imit/base >20 >3 >20 >30	90 0 127 <1 685 1239 775 872 3893 <u>current</u> 4 2 2 2 <u>current</u> 0.2 9.4 17.8	114 2 118 0 627 1154 686 767 2970 history1 5 2 0 history1 0.2 8.8 17.3	109 0 123 <1 637 1187 644 796 3619 history2 5 0 2 5 0 2 <u>history2</u> 0.2 9.2 17.8

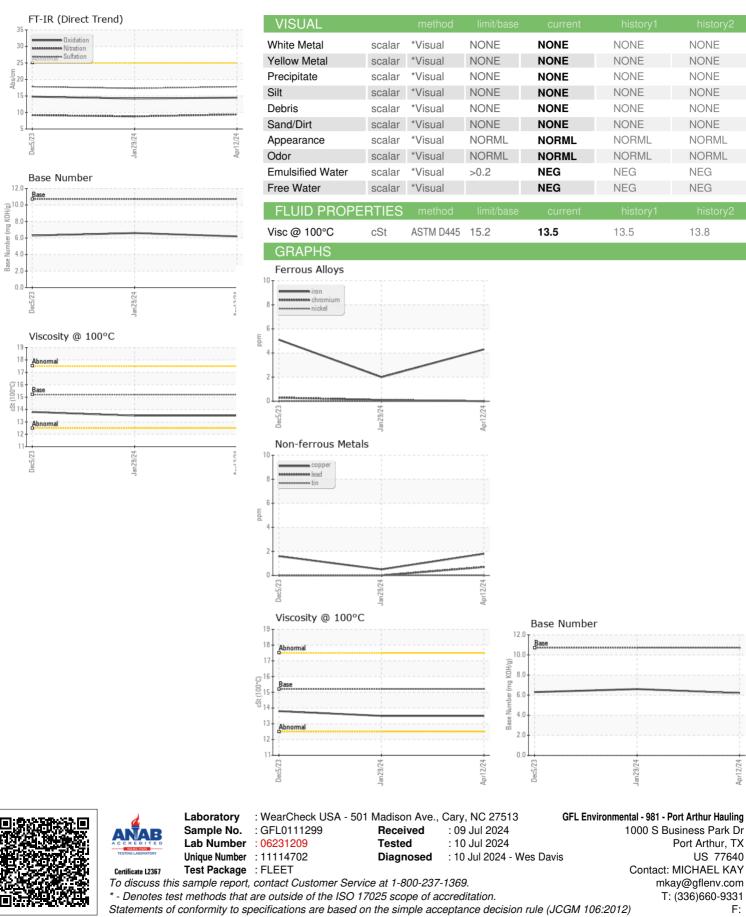


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Base

## **OIL ANALYSIS REPORT**



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