

### **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# FREIGHTLINER 1241

Diesel Engine Fluid MOBIL 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.

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0917324	WC0893851	
Sample Date		Client Info		27 Mar 2024	24 Jan 2024	
Machine Age	mls	Client Info		112084	100294	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	٧	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	20	17	
Chromium	ppm	ASTM D5185m	>5	2	<1	
Nickel	ppm	ASTM D5185m	>2	1	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>30	5	5	
Lead	ppm	ASTM D5185m	>30	1	0	
Copper	ppm	ASTM D5185m	>150	4	4	
Tin	ppm	ASTM D5185m	>5	1	0	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current <1	history1 5	history2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	<1	5	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	<1 0	5 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 58	5 0 60	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 58 1	5 0 60 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 0 58 1 913	5 0 60 <1 945	
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	<1 0 58 1 913 1072	5 0 60 <1 945 1056	   
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	limit/base	<1 0 58 1 913 1072 1086	5 0 60 <1 945 1056 1053	   
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	limit/base	<1 0 58 1 913 1072 1086 1215	5 0 60 <1 945 1056 1053 1237	
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		<1 0 58 1 913 1072 1086 1215 3391	5 0 60 <1 945 1056 1053 1237 2879	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	limit/base	<1 0 58 1 913 1072 1086 1215 3391 current	5 0 60 <1 945 1056 1053 1237 2879 history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	limit/base	<1 0 58 1 913 1072 1086 1215 3391 current 7	5 0 60 <1 945 1056 1053 1237 2879 history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base >20 >118	<1 0 58 1 913 1072 1086 1215 3391 current 7 <1	5 0 60 <1 945 1056 1053 1237 2879 history1 6 1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	limit/base >20 >118 >20	<1 0 58 1 913 1072 1086 1215 3391 current 7 <1 8	5 0 60 <1 945 1056 1053 1237 2879 history1 6 1 6 1 6	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >118 >20 limit/base	<1 0 58 1 913 1072 1086 1215 3391 current 7 <1 8	5 0 60 <1 945 1056 1053 1237 2879 history1 6 1 6 1 6 1 6 1 6	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	limit/base >20 >118 >20 limit/base >3	<1 0 58 1 913 1072 1086 1215 3391 current 7 <1 8 <i>current</i> 0.4	5 0 60 <1 945 1056 1053 1237 2879 history1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 3 1 2 8 79	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >118 >20 limit/base >3 >20	<1 0 58 1 913 1072 1086 1215 3391 current 7 <1 8 current 0.4 7.1	5 0 60 <1 945 1056 1053 1237 2879 history1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >118 >20 limit/base >3 >20 s33 >20	<1 0 58 1 913 1072 1086 1215 3391 current 7 <1 8 current 0.4 7.1 19.1	5 0 60 <1 945 1056 1053 1237 2879 history1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 8 5 18.5	     history2  history2  history2



30

2!

Abs/cm

10

10.

6.

18

16 cSt (100°C)

Jan24/24

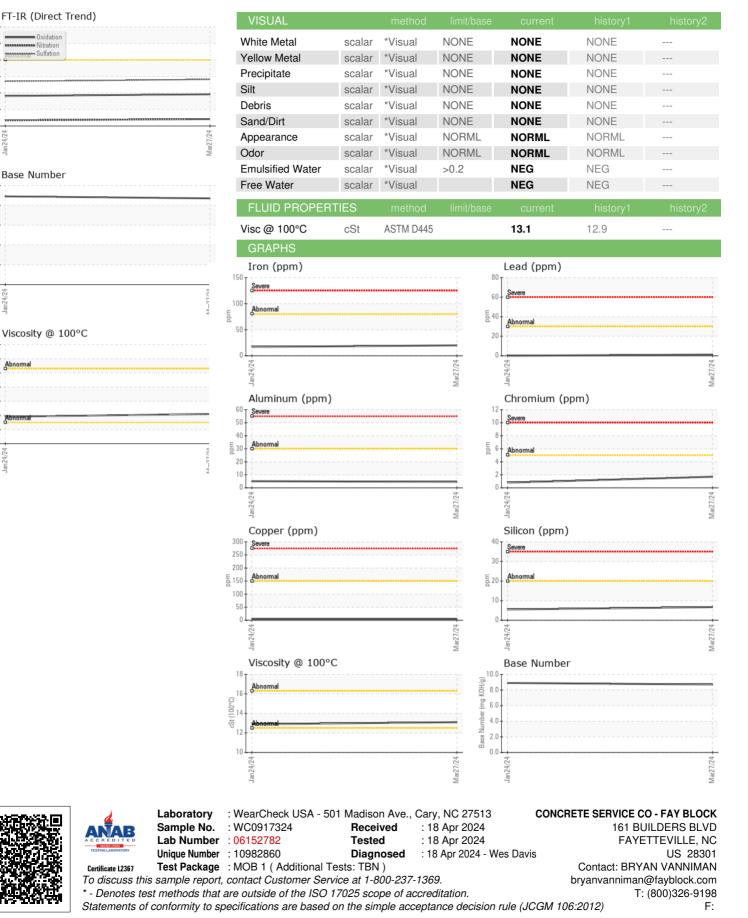
Ď

(mg KOH/g)

mbe 4.

Base 21

## **OIL ANALYSIS REPORT**



Contact/Location: BRYAN VANNIMAN - CONFAY