

### **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

#### Machine Id

# 926068 PETERBILT 320

Diesel Engine

TIER ONE 15W0 (--- 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.

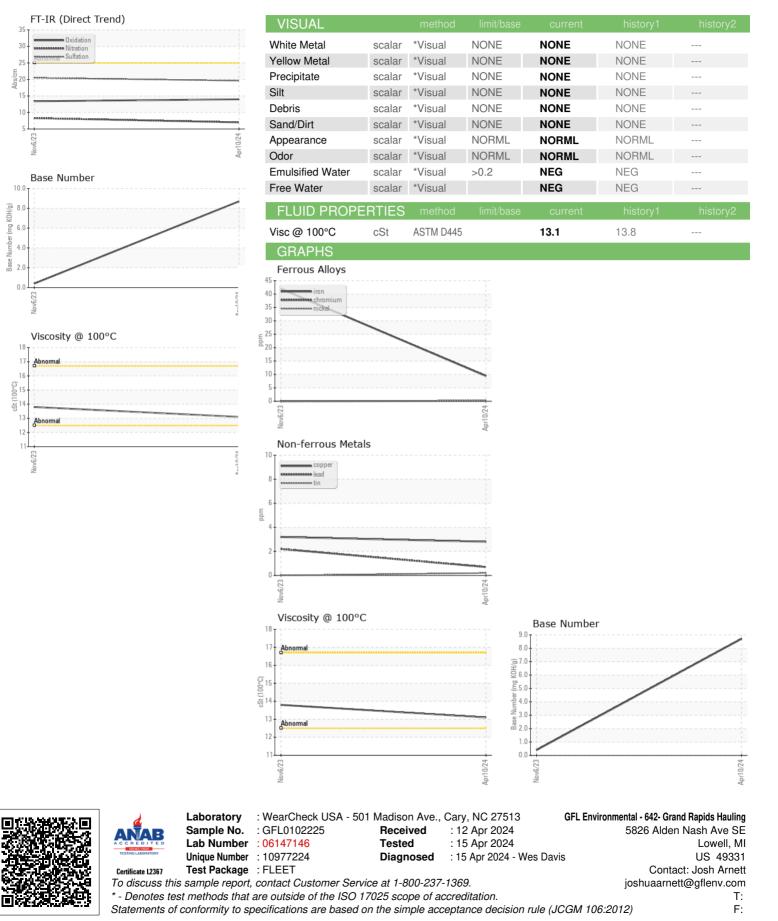
#### Fluid Condition

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

	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0102225	GFL0061458	
Sample Date		Client Info		10 Apr 2024	06 Nov 2023	
Machine Age	hrs	Client Info		3408	289240	
Oil Age	hrs	Client Info		43	600	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	ABNORMAL	
CONTAMINAT	ION	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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	9	42	
Chromium	ppm	ASTM D5185m	>4	<1	0	
Nickel	ppm	ASTM D5185m	>2	0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>25	2	2	
Lead	ppm	ASTM D5185m	>45	<1	2	
Copper	ppm	ASTM D5185m	>85	3	3	
Tin	ppm	ASTM D5185m	>4	<1	0	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 13	history1 4	history2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	13	4	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	13 0	4	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	13 0 55	4 0 60	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	13 0 55 <1	4 0 60 0	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	13 0 55 <1 873	4 0 60 0 990	
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	13 0 55 <1 873 1123	4 0 60 0 990 1223	
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	13 0 55 <1 873 1123 1063	4 0 60 0 990 1223 1119	
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	13 0 55 <1 873 1123 1063 1240	4 0 60 0 990 1223 1119 1389	
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		13 0 55 <1 873 1123 1063 1240 3743	4 0 60 0 990 1223 1119 1389 3226	
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	13 0 55 <1 873 1123 1063 1240 3743 current	4 0 60 0 990 1223 1119 1389 3226 history1	     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 ASTM D5185m	limit/base	13 0 55 <1 873 1123 1063 1240 3743 <i>current</i> 4	4 0 60 990 1223 1119 1389 3226 history1 5	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 ASTM D5185m	limit/base >30	13 0 55 <1 873 1123 1063 1240 3743 <u>current</u> 4 2	4 0 60 990 1223 1119 1389 3226 history1 5 2	      history2
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 >30 >20	13 0 55 <1 873 1123 1063 1240 3743 current 4 2 2	4 0 60 990 1223 1119 1389 3226 history1 5 2 4 history1 2	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >30 >20 limit/base	13 0 55 <1 873 1123 1063 1240 3743 <b>current</b> 4 2 2 2	4 0 60 990 1223 1119 1389 3226 history1 5 2 4 4 history1	     history2    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 TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >30 >20 limit/base >3	13 0 55 <1 873 1123 1063 1240 3743 <i>current</i> 4 2 2 2 <i>current</i> 0.7	4 0 60 990 1223 1119 1389 3226 history1 5 2 4 history1 2	     history2   history2
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >30 >20 limit/base >3 >20	13 0 55 <1 873 1123 1063 1240 3743 <i>current</i> 4 2 2 2 <i>current</i> 0.7 7.0	4 0 60 0 990 1223 1119 1389 3226 history1 5 2 4 4 history1 2 8.3	     history2   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 ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >30 >20 limit/base >3 >20 >30 >30 >30 >30	13 0 55 <1 873 1123 1063 1240 3743 <b>current</b> 4 2 2 2 <b>current</b> 0.7 7.0 19.6	4 0 60 0 990 1223 1119 1389 3226 history1 5 2 4 history1 2 8.3 20.5	     history2  history2  history2



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Submitted By: See also GFL642B - Jessica Shearer