

OIL ANALYSIS REPORT

Sample Rating Trend



Area Old Bridge Machine Id PETERBILT 1324 Component

Diesel Engine

GIBRALTAR 15W/40 SUPER S-3 LX (11)

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.

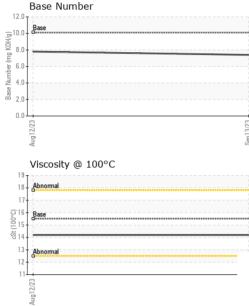
Fluid Condition

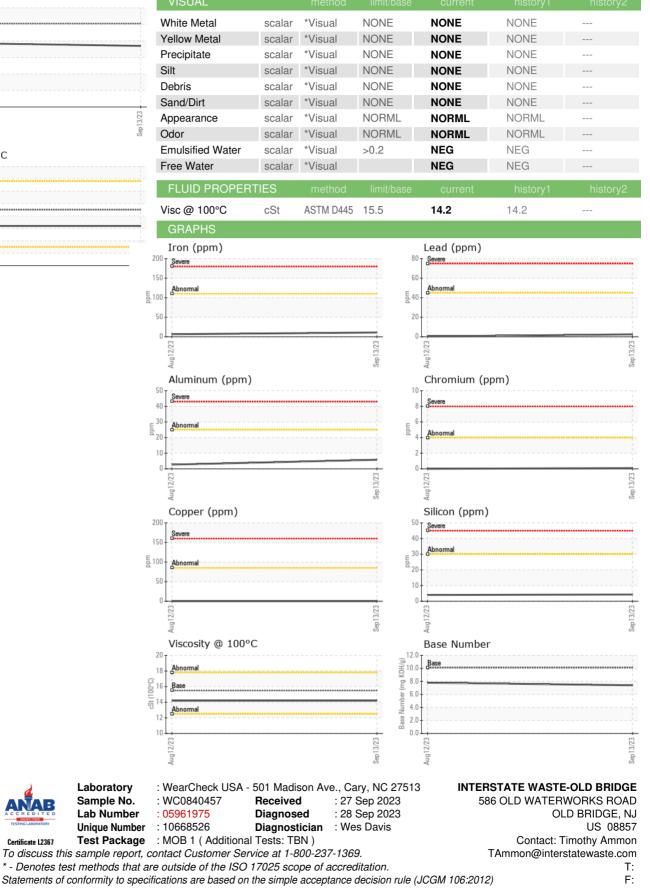
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			Aug2023	Sep2023		
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0840457	WC0831117	
Sample Date		Client Info		13 Sep 2023	12 Aug 2023	
Machine Age	hrs	Client Info		10821	10572	
Oil Age	hrs	Client Info		450	150	
Oil Changed		Client Info		Changed	Filtered	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	11	6	
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	6	3	
Lead	ppm	ASTM D5185m	>45	2	<1	
Copper	ppm	ASTM D5185m	>85	<1	<1	
Tin	ppm	ASTM D5185m	>4	<1	0	
Vanadium	ppm	ASTM D5185m	27	0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
	pp	20100		•	-	
ADDITIVES		method	limit/base		historv1	historv2
ADDITIVES	nnm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	8	11	
Boron Barium	ppm	ASTM D5185m ASTM D5185m		8 0	11 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 66	8 0 65	11 0 65	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66	8 0 65 <1	11 0 65 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000	8 0 65 <1 876	11 0 65 <1 856	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000 1050	8 0 65 <1 876 1290	11 0 65 <1 856 1310	
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	66 1000 1050 1150	8 0 65 <1 876 1290 1020	11 0 65 <1 856 1310 1045	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000 1050	8 0 65 <1 876 1290 1020 1300	11 0 65 <1 856 1310 1045 1262	
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	66 1000 1050 1150	8 0 65 <1 876 1290 1020	11 0 65 <1 856 1310 1045 1262 3830	
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	66 1000 1050 1150 1270	8 0 65 <1 876 1290 1020 1300 3365 current	11 0 65 <1 856 1310 1045 1262 3830 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	66 1000 1050 1150 1270	8 0 65 <1 876 1290 1020 1300 3365 current 4	11 0 65 <1 856 1310 1045 1262 3830 history1 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	66 1000 1050 1150 1270 limit/base >30	8 0 65 <1 876 1290 1020 1300 3365 Current 4 7	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	66 1000 1050 1150 1270 limit/base >30 >20	8 0 65 <1 876 1290 1020 1300 3365 <u>current</u> 4 7 8	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	66 1000 1050 1150 1270 limit/base >30 >20 limit/base	8 0 65 <1 876 1290 1020 1300 3365 <u>current</u> 4 7 8	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 2 history1	 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	66 1000 1050 1150 1270 limit/base >30 >20 limit/base >3	8 0 65 <1 876 1290 1020 1300 3365 <u>current</u> 4 7 8 <u>current</u> 0.3	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 history1 0.2	 history2 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	66 1000 1050 1150 1270 imit/base >30 >20 imit/base >3 >20	8 0 65 <1 876 1290 1020 1300 3365 <i>current</i> 4 7 8 <i>current</i> 0.3 8.9	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 history1 0.2 7.2	 history2 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	66 1000 1050 1150 1270 imit/base >30 imit/base >3 >20 imit/base >3 >20	8 0 65 <1 876 1290 1020 1300 3365 <u>current</u> 4 7 8 <u>current</u> 0.3 8.9 20.0	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 <u>history1</u> 0.2 7.2 18.3	 history2 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	66 1000 1050 1150 1270 imit/base >30 >20 imit/base >3 >20	8 0 65 <1 876 1290 1020 1300 3365 <i>current</i> 4 7 8 <i>current</i> 0.3 8.9	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 history1 0.2 7.2	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Solicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	66 1000 1050 1150 1270 imit/base >30 imit/base >3 >20 imit/base >3 >20	8 0 65 <1 876 1290 1020 1300 3365 Current 4 7 8 Current 0.3 8.9 20.0 current 16.1	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 <u>history1</u> 0.2 7.2 18.3	 history2 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 D7844 *ASTM D7844 *ASTM D7844	66 1000 1050 1150 1270 imit/base >30 220 imit/base >3 >20 >30	8 0 65 <1 876 1290 1020 1300 3365 Current 4 7 8 Current 0.3 8.9 20.0	11 0 65 <1 856 1310 1045 1262 3830 history1 4 7 2 history1 0.2 7.2 18.3 history1	 history2 history2 history2 history2



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Certificate L2367