

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL



#### Area Ewing Hauling Machine Id MACK 2568

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.

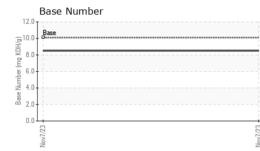
### Fluid Condition

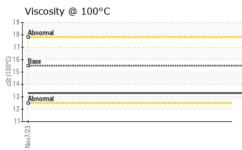
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

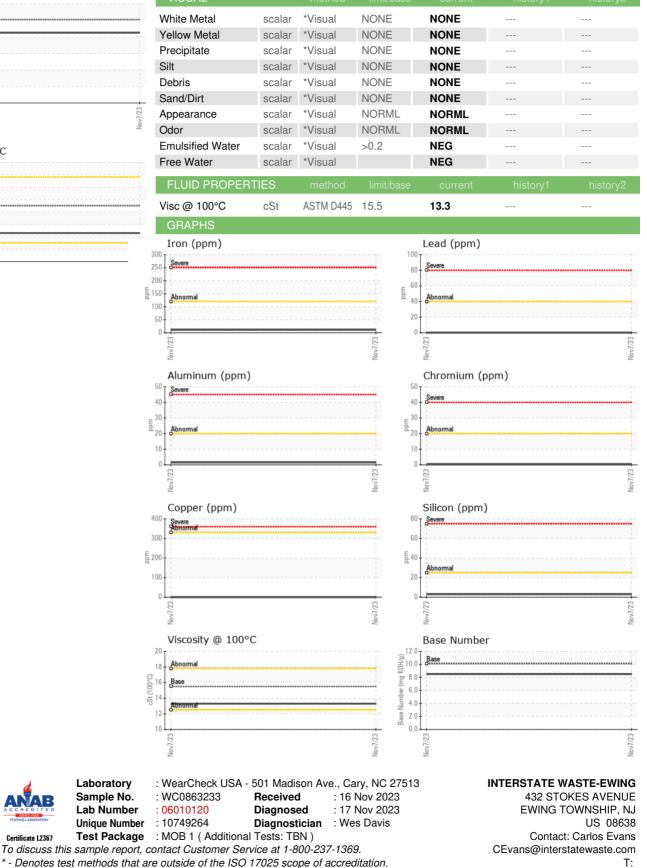
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0863233		
Sample Date		Client Info		07 Nov 2023		
Machine Age	hrs	Client Info		44014		
Oil Age	hrs	Client Info		150		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	11		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>5	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	0		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		history1	history2
	ppm ppm		limit/base	current 5 0		
Boron	ppm	ASTM D5185m	limit/base	5		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		5 0		
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m		5 0 57		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66	5 0 57 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000	5 0 57 <1 744		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	66 1000 1050	5 0 57 <1 744 1186	  	  
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	5 0 57 <1 744 1186 958		
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	66 1000 1050 1150	5 0 57 <1 744 1186 958 1141	    	
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	66 1000 1050 1150 1270	5 0 57 <1 744 1186 958 1141 2953		
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 limit/base	5 0 57 <1 744 1186 958 1141 2953 current		     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 <b>method</b> ASTM D5185m	66 1000 1050 1150 1270 limit/base	5 0 57 <1 744 1186 958 1141 2953 current 3	     history1	    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 <b>method</b> ASTM D5185m	66 1000 1050 1150 1270 limit/base >25	5 0 57 <1 744 1186 958 1141 2953 current 3 0	     history1	    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 1270 1270 225 >22	5 0 57 <1 744 1186 958 1141 2953 current 3 0 0	     history1  	     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	66 1000 1050 1150 1270 <b>limit/base</b> >25 >20 <b>limit/base</b>	5 0 57 <1 744 1186 958 1141 2953 current 3 0 0 0	     history1   history1	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	66 1000 1050 1150 1270 <b>limit/base</b> >25 >20 <b>limit/base</b> >20	5 0 57 <1 744 1186 958 1141 2953 <i>current</i> 3 0 0 0 <i>current</i> 1.7	     history1   history1 	     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 1270 imit/base >25 >20 imit/base >4 >20	5 0 57 <1 744 1186 958 1141 2953 <i>current</i> 3 0 0 0 <i>current</i> 1.7 7.8	history1 history1	     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 225 225 220 220 1imit/base >4 >20 >30	5 0 57 <1 744 1186 958 1141 2953 <i>current</i> 3 0 0 0 <i>current</i> 1.7 7.8 20.5 <i>current</i>	      history1  history1  history1	     history2  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 D7624 *ASTM D7415	66 1000 1050 1150 1270 225 >25 >20 <b>imit/base</b> >4 >20 >4 >20	5 0 57 <1 744 1186 958 1141 2953 <u>current</u> 3 0 0 0 <u>current</u> 1.7 7.8 20.5	     history1  history1  history1	    history2  history2  history2



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\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

Certificate L2367

Laboratory

Sample No.

F: