

# **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id MACK 429122-SW4919 Component

### Diesel Engine

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

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#### 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

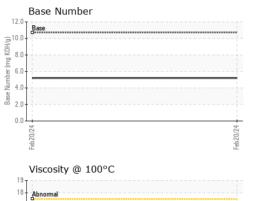
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0111277		
Sample Date		Client Info		20 Feb 2024		
Machine Age	hrs	Client Info		9026		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	3		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>5	0		
Titanium	ppm	ASTM D5185m	>2	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm		>20	3		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	history1	history2
	ppm ppm		limit/base			
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron Barium Molybdenum	ppm	method ASTM D5185m	limit/base	current 62	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 62 0	history1 	history2 
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 62 0 114 0 635	history1  	history2  
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           62           0           114           0           635           1243	history1   	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695           786	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695           786	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695           786           3010           current           4	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695           786           3010           current           4           3	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20	current           62           0           114           0           635           1243           695           786           3010           current           4	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	limit/base	current           62           0           114           0           635           1243           695           786           3010           current           4           3	history1	history2
ADDITIVES 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	method         ASTM D5185m	limit/base >25 >20 limit/base >4	current         62         0         114         0         635         1243         695         786         3010         current         4         3         0         current         0         current         0.2	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20 limit/base >20	current           62           0           114           0           635           1243           695           786           3010           current           4           3           0           current           0.2           9.8	history1 history1 history1 history1	history2 history2 history2 history2
ADDITIVES 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	method         ASTM D5185m	limit/base >25 >20 limit/base >4	current         62         0         114         0         635         1243         695         786         3010         current         4         3         0         current         0         current         0.2	history1 history1 history1 history1	history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20 limit/base >20	current           62           0           114           0           635           1243           695           786           3010           current           4           3           0           current           0.2           9.8	history1   history1                        history1	history2   history2                        history2
ADDITIVES 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 ppm ppm	method           ASTM D5185m           ASTM D5185m	Iimit/base >25 >20 Iimit/base >20 ≤4 >20 >4 >20 >30	current         62         0         114         0         635         1243         695         786         3010         current         4         3         0         current         0         current         0.2         9.8         18.8	history1                        history1            history1            history1               history1 </th <th>history2  history2               history2   </th>	history2  history2               history2



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# **OIL ANALYSIS REPORT**



e Metal w Metal ipitate is d/Dirt earance lsified Water Water UID PROPE @ 100°C RAPHS rous Alloys	scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual ASTM D445	NONE NONE NONE NONE NORML NORML >0.2 15.2	NONE NONE NONE NONE NORML NORML NEG NEG 12.8	history1	      history2
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is d/Dirt earance lsified Water Water UID PROPE @ 100°C RAPHS rous Alloys	scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual <b>trisual</b>	NONE NONE NORML NORML >0.2 limit/base	NONE NONE NORML NORML NEG NEG	     history1	     history2
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I/Dirt earance Isified Water Water UID PROPE @ 100°C RAPHS rous Alloys	scalar scalar scalar scalar scalar RTIES	*Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >0.2 limit/base	NONE NORML NORML NEG NEG current	   history1	   history2
earance Isified Water Water UID PROPE @ 100°C RAPHS rous Alloys	scalar scalar scalar scalar RTIES	*Visual *Visual *Visual *Visual method	NORML NORML >0.2 limit/base	NORML NORML NEG NEG current	   history1	   history2
Isified Water Water UID PROPE @ 100°C RAPHS rous Alloys	scalar scalar scalar RTIES	*Visual *Visual *Visual method	NORML >0.2 limit/base	NORML NEG NEG current	  history1	  history2
Isified Water Water UID PROPE @ 100°C RAPHS rous Alloys	scalar scalar RTIES	*Visual *Visual method	>0.2 limit/base	NEG NEG current	  history1	 history2
Water UID PROPE @ 100°C RAPHS rous Alloys	scalar RTIES	*Visual method	limit/base	NEG current	 history1	 history2
UID PROPE @ 100°C RAPHS rous Alloys	RTIES	method		current	history1	history2
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2			(5)HO XON 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	.0		
9			10. (6/H0 X B) asemunu 4 8. 8. 8. 8. 8. 8. 8. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	0		
2			( <sup>B</sup> )HOX Bu) Ja quun 4 Base R 2			
3			Base Number (mg KOH/g) 9			
	cosity @ 100°C	nnnnn lead	cosity @ 100°C	cosity @ 100°C	costibu @ 100%C	cosity @ 100°C Base Number