

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id MACK 20171 Component Natural Gas Engine

Fluid RDL-3647 (--- 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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0007314		
Sample Date		Client Info		09 May 2024		
Machine Age	hrs	Client Info		7433		
Oil Age	hrs	Client Info		465		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	9		
Chromium	ppm	ASTM D5185m	>5	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m	>5	<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>25	2		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>150	0		
Tin	ppm	ASTM D5185m	>4	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	7		
Barium	ppm	ASTM D5185m	5	0		
Molybdenum	ppm	ASTM D5185m	50	53		
Manganese	ppm	ASTM D5185m	0	<1		
Magnesium	ppm	ASTM D5185m	560	542		
Calcium	ppm					
		ASTM D5185m	1510	1715		
Phosphorus		ASTM D5185m ASTM D5185m	1510 780	1715 686		
	ppm	ASTM D5185m	780	-		
Zinc				686		
Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m	780 870	686 947		
Zinc Sulfur CONTAMINANTS	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	780 870 2040	686 947 2643		
Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	780 870 2040 limit/base	686 947 2643 current	 history1	 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	780 870 2040 limit/base	686 947 2643 current 14	 history1	 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	780 870 2040 limit/base >25	686 947 2643 current 14 4	 history1	 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	780 870 2040 limit/base >25 >20	686 947 2643 current 14 4 <1 current	 history1 history1	 history2 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	780 870 2040 limit/base >25 >20 limit/base	686 947 2643 current 14 4 <1 current 0	 history1 history1 	 history2 history2
Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	780 870 2040 imit/base >25 >20 imit/base	686 947 2643 <u>current</u> 14 4 <1 <u>current</u> 0 11.0	 history1 history1 	 history2 history2 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm % Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844	780 870 2040 imit/base >25 >20 imit/base >20 >30	686 947 2643 current 14 4 <1 current 0 11.0 21.7	 history1 history1 history1 	 history2 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	780 870 2040 imit/base >25 >20 imit/base >20 >30 imit/base	686 947 2643 <u>current</u> 14 4 <1 <u>current</u> 0 11.0 21.7 <u>current</u>	 history1 history1 history1	 history2 history2 history2
Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm % Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844	780 870 2040 imit/base >25 >20 imit/base >20 >30	686 947 2643 current 14 4 <1 current 0 11.0 21.7	 history1 history1 history1 	 history2 history2



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