

OIL ANALYSIS REPORT



Machine Id **915** Component **Diesel Engine** Fluid **SHELL ROTELLA T 15W40 (--- GAL)**

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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 acceptable for the time in service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0934099		
Sample Date		Client Info		09 May 2024		
Machine Age	mls	Client Info		980000		
Oil Age	mls	Client Info		11375		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	2		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 316	current 0	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 316 0.0	current 0 0	history1 	history2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2	current 0 0 55	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2	current 0 0 55 0	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2 24	Current 0 0 55 0 898	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2 24 2292	Current 0 55 0 898 1084	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064	Current 0 0 555 0 898 1084 1063	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160	Current 0 0 555 0 898 1084 1063 1180	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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	limit/base 316 0.0 1.2 24 2292 1064 1160 4996	Current 0 55 0 898 1084 1063 1180 3417	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm 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	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base	Current 0 55 0 898 1084 1063 1180 3417 Current	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	method ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25	current 0 0 55 0 898 1084 1063 1180 3417 current 4	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Solium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2	history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	method ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2 2	history1 history1	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20	current 0 55 0 898 1084 1063 1180 3417 current 4 2 2 current	history1 history1 history1	history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	method ASTM D5185m ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20 limit/base >3	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2 2 current 0.1	history1	history2 history2 history2 history2 history2
ADDITIVES 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	method ASTM D5185m	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 25 >20 limit/base >3 >20	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2 current 0.1 5.1	history1 history1 history1 history1 history1	history2 history2 history2
ADDITIVES 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	method ASTM D5185m ASTM D71824 *ASTM D7624	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 20 limit/base >3 >20	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2 current 0.1 5.1 17.9	history1 history1 history1 history1	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base 316 0.0 1.2 24 2292 1064 1160 4996 limit/base >20 >30 limit/base	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2 current 0.1 5.1 17.9 current	history1 history1 history1 history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D71824 *ASTM D7624 *ASTM D7415 method *ASTM D7414	imit/base 316 0.0 1.2 24 2292 1064 1160 4996 imit/base >20 imit/base >20 30 >20 >30 imit/base >25	current 0 0 55 0 898 1084 1063 1180 3417 current 4 2 current 0.1 5.1 17.9 current 13.8	history1 history1 <th>history2 history2 history2 history2 history2 history2 history2 </th>	history2 history2 history2 history2 history2 history2 history2



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