

OIL ANALYSIS REPORT



Machine Id

Component Diesel Engine Fluid SHELL ROTELLA T 15W40 (6 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		TR06142476		
Sample Date		Client Info		03 Apr 2024		
Machine Age	mls	Client Info		490600		
Oil Age	mls	Client Info		6000		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATION	٧	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	10		
Chromium	ppm	ASTM D5185m	>6	0		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m	>2	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>30	3		
Lead	ppm	ASTM D5185m	>10	0		
Copper	ppm	ASTM D5185m	>150	2		
Tin	ppm	ASTM D5185m	>4	<1		
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 316	current 372	history1	history2
	ppm ppm					
Boron		ASTM D5185m	316	372		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	316 0.0	372 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0	372 0 106		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2	372 0 106 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24	372 0 106 <1 576		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292	372 0 106 <1 576 1608	 	
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	316 0.0 1.2 24 2292 1064	372 0 106 <1 576 1608 855		
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	316 0.0 1.2 24 2292 1064 1160	372 0 106 <1 576 1608 855 1026		
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 ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	372 0 106 <1 576 1608 855 1026 2847		
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	316 0.0 1.2 24 2292 1064 1160 4996	372 0 106 <1 576 1608 855 1026 2847 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >20	372 0 106 <1 576 1608 855 1026 2847 current 7	 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 method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >20	372 0 106 <1 576 1608 855 1026 2847 <u>current</u> 7 2	 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	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >20	372 0 106 <1 576 1608 855 1026 2847 current 7 2 2 <1	 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	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >20 limit/base	372 0 106 <1 576 1608 855 1026 2847 <i>current</i> 7 2 2 <1	 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	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >20 limit/base >20	372 0 106 <1 576 1608 855 1026 2847 <i>current</i> 7 2 <1 2 <1 <i>current</i>	 history1 history1 history1	 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	316 0.0 1.2 24 2292 1064 1160 4996 imit/base >20 imit/base >20	372 0 106 <1 576 1608 855 1026 2847 <i>current</i> 7 2 2 <1 <i>current</i> 0.1 5.2	 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 D5185m	316 0.0 1.2 24 2292 1064 1160 4996 imit/base >20 imit/base >3 >20 >3 >20	372 0 106 <1 576 1608 855 1026 2847 <i>current</i> 7 2 <1 2 <1 <i>current</i> 0.1 5.2 22.7	 history1 history1 history1	 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	316 0.0 1.2 24 2292 1064 1160 4996 imit/base >20 >20 imit/base >3 >20 >30 >30	372 0 106 <1 576 1608 855 1026 2847 <i>current</i> 7 2 2847 <i>current</i> 0.1 5.2 22.7	 history1 history1 history1 history1	 history2 history2 history2 history2 history2



35

30

25

Abs/cm

10

12.0

(mg KOH/g)

8.0

6.0

4 (Base

> 20 18

00

रतुं 14

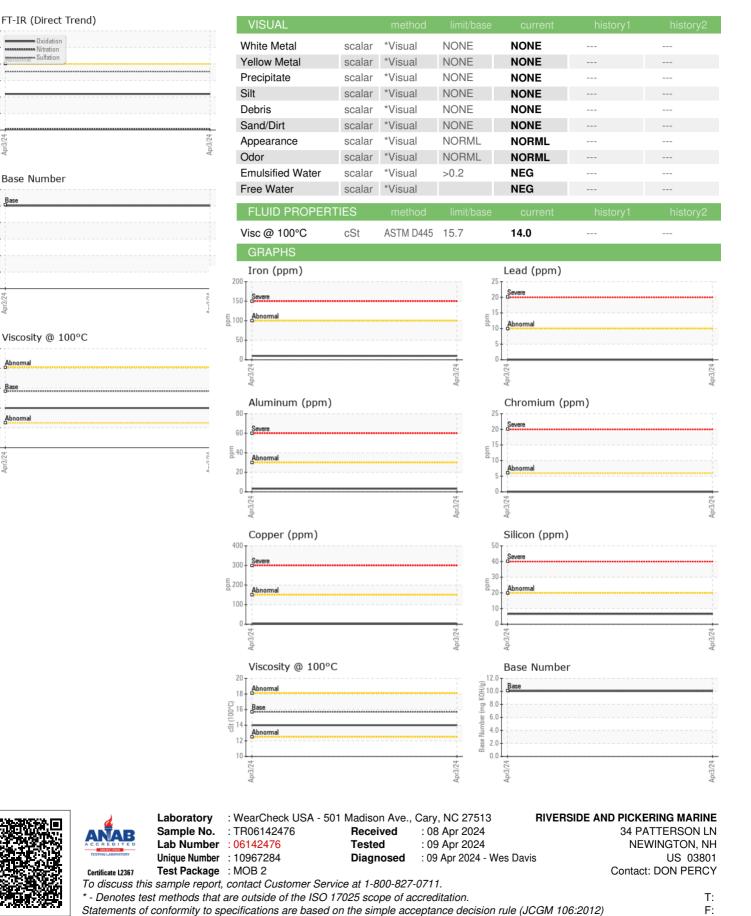
12

10

Apr3/24

nr3/74

OIL ANALYSIS REPORT



Report Id: RIVNEWTR [WUSCAR] 06142476 (Generated: 04/09/2024 17:13:49) Rev: 1

Contact/Location: DON PERCY - RIVNEWTR