

OIL ANALYSIS REPORT

Sample Rating Trend



Area DAVE BELL Machine Id KENWORTH 611A

Component Diesel Engine

Fluid

SHELL ROTELLA T5 10W30 (CJ4) (--- 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.

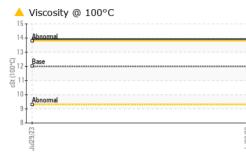
Fluid Condition

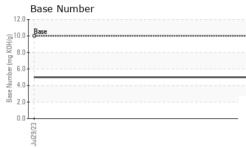
The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

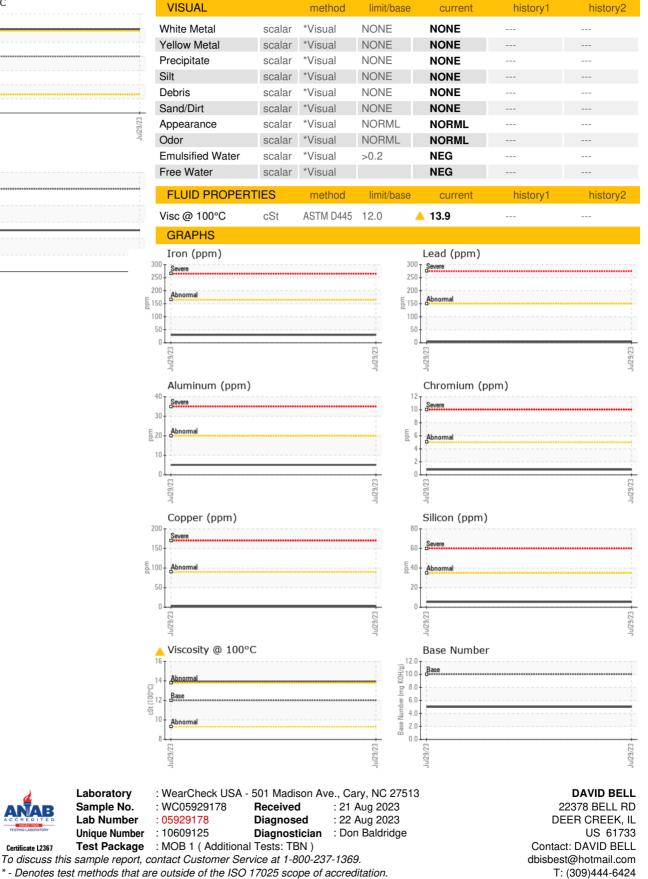
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC05929178		
Sample Date		Client Info		29 Jul 2023		
Machine Age	hrs	Client Info		17740		
Oil Age	hrs	Client Info		670		
Oil Changed		Client Info		N/A		
Sample Status				ATTENTION		
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel	•	WC Method	>3.0	<1.0		
Glycol		WC Method	20.0	NEG		
WEAR METALS		method	limit/base	current	history1	history2
lron	ppm	ASTM D5185m	>165	30		
Chromium	ppm	ASTM D5185m	>5	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m	>2	<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>20	5		
Lead	ppm	ASTM D5185m	>150	5		
Copper	ppm	ASTM D5185m	>90	2		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		23		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum						
morybaomann	ppm	ASTM D5185m		68		
-	ppm ppm	ASTM D5185m ASTM D5185m		68 <1		
Manganese						
Manganese Magnesium	ppm	ASTM D5185m		<1		
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m		<1 30		
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		<1 30 2191		
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 30 2191 1024		
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 30 2191 1024 1238	 	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 30 2191 1024 1238 4198	 	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 30 2191 1024 1238 4198 current	 	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	>35	<1 30 2191 1024 1238 4198 current 5	 history1	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	>35	<1 30 2191 1024 1238 4198 current 5 13	 history1 	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>35 >20	<1 30 2191 1024 1238 4198 <u>current</u> 5 13 10	 history1 	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>35 >20 limit/base	<1 30 2191 1024 1238 4198 current 5 13 10 current 0.5	 history1 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm 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	>35 >20 limit/base >7.5	<1 30 2191 1024 1238 4198 current 5 13 10 current	 history1 history1	 history2 history2
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	>35 >20 limit/base >7.5 >20	<1 30 2191 1024 1238 4198 current 5 13 10 current 0.5 9.8	 history1 history1	 history2 history2
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	>35 >20 limit/base >7.5 >20 >30	<1 30 2191 1024 1238 4198 <u>current</u> 5 13 10 <u>current</u> 0.5 9.8 22.6	 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)

F:

Certificate L2367

Laboratory