

### **OIL ANALYSIS REPORT**

Sample Rating Trend



# Gen tech USA Gen 1

Diesel Engine Fluid SHELL 15W40 (7 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### 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		WC0802634	WC0700363	
Sample Date		Client Info		14 Jul 2023	24 May 2022	
Machine Age	hrs	Client Info		385	360	
Oil Age	hrs	Client Info		25	360	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method	20	NEG	NEG	
,	_					
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	2	3	
Chromium	ppm	ASTM D5185m	>20	0	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	1	1	
Lead	ppm	ASTM D5185m	>40	<1	<1	
Copper	ppm	ASTM D5185m	>330	<1	2	
Tin	ppm	ASTM D5185m	>15	0	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 195	history1 115	history2
	ppm ppm		limit/base		· · · · · · · · · · · · · · · · · · ·	
Boron		ASTM D5185m	limit/base	195	115	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	195 0	115 1	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	195 0 65	115 1 13	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	195 0 65 <1	115 1 13 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	195 0 65 <1 392	115 1 13 <1 616	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	195 0 65 <1 392 1692	115 1 13 <1 616 1387	   
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	limit/base	195 0 65 <1 392 1692 970	115 1 13 <1 616 1387 1042	   
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	limit/base	195 0 65 <1 392 1692 970 1190	115 1 13 <1 616 1387 1042 1238	
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	limit/base	195 0 65 <1 392 1692 970 1190 4202	115 1 13 <1 616 1387 1042 1238 3975	
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	limit/base	195 0 65 <1 392 1692 970 1190 4202 current	115 1 13 <1 616 1387 1042 1238 3975 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 <b>method</b>	limit/base	195 0 65 <1 392 1692 970 1190 4202 current 5	115 1 13 <1 616 1387 1042 1238 3975 history1 4	     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 <b>method</b> ASTM D5185m	limit/base >25 >150	195 0 65 <1 392 1692 970 1190 4202 <u>current</u> 5 <	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2	     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	limit/base >25 >150 >20 limit/base	195 0 65 <1 392 1692 970 1190 4202 current 5 < <1 2	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2 3	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >150 >20 limit/base >3	195 0 65 <1 392 1692 970 1190 4202 current 5 <1 2 2	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2 3 history1	     history2    history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >150 >20 limit/base >3	195 0 65 <1 392 1692 970 1190 4202 <u>current</u> 5 <1 2 <u>current</u> 0.1	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2 3 history1 0.1	     history2   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	limit/base >25 >150 >20 limit/base >3 >20	195 0 65 <1 392 1692 970 1190 4202 <i>current</i> 5 <1 2 <i>current</i> 0.1 5.4	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2 3 history1 0.1 6.5	     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 *ASTM D7844	limit/base >25 >150 >20 limit/base >3 >20 >30	195 0 65 <1 392 1692 970 1190 4202 <b>current</b> 5 <1 2 <b>current</b> 0.1 5.4 17.7 <b>current</b>	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2 3 history1 0.1 6.5 19.0 history1	     history2  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 D5185m	limit/base >25 >150 >20 limit/base >3 >20 >30	195 0 65 <1 392 1692 970 1190 4202 <u>current</u> 5 <1 2 <u>current</u> 0.1 5.4 17.7	115 1 13 <1 616 1387 1042 1238 3975 history1 4 2 3 history1 0.1 6.5 19.0	    history2  history2  history2

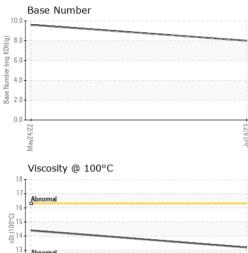


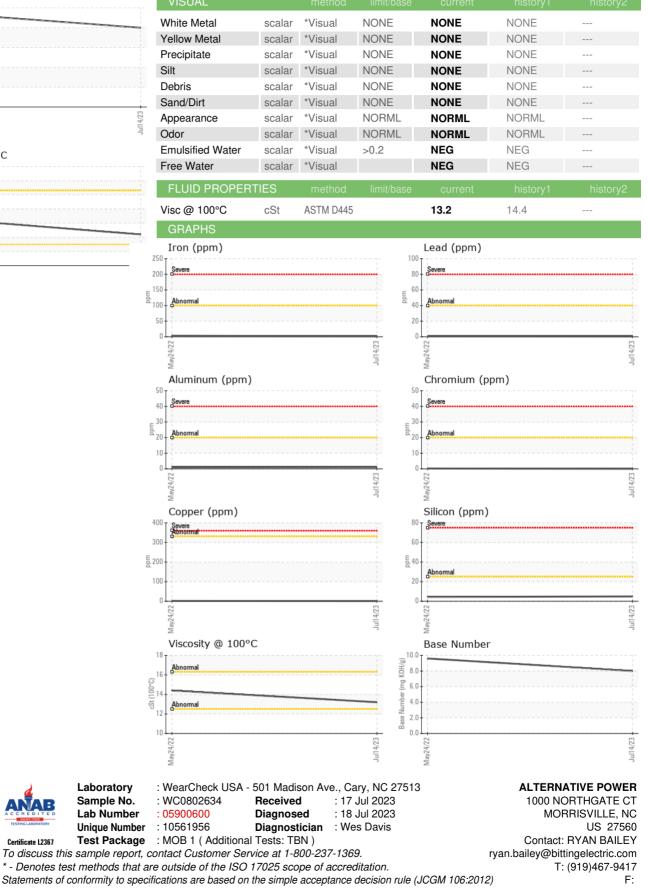
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## **OIL ANALYSIS REPORT**





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Page 2 of 2