

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-330-7
Relating to Certification of New Medium-Duty Motor Vehicle Engines

BAYTECH CORPORATION

Pursuant to the authority vested in the Air Resources Board at Sections 43100, 43101, and 43102 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following 2000 model-year Baytech Corporation Otto-cycle engines are certified for use in medium-duty vehicles with a manufacturer's gross vehicle weight rating (GVWR) of 8,501 to 14,000 pounds:

Emission Standard Category: Ultra-Low-Emission Vehicle (ULEV)

Fuel Type: Dual-Fuel Compressed Natural Gas (CNG) or Gasoline

| <u>Engine Family</u> | <u>Displacement</u> | | <u>Exhaust Emission Control Systems and Special Features</u> |
|-----------------------|---------------------|---------------------|---|
| | <u>Liters</u> | <u>Cubic Inches</u> | |
| YBYTH05.7ULV (L31) | 5.7 | 350 | Dual Three Way Catalytic Converters Dual Heated Oxygen Sensors (two) Sequential Multiport Fuel Injection (Gasoline) Throttle Body Fuel Injection (CNG) Engine Control Module Exhaust Gas Recirculation |
| YBYTH05.7OCA (L31) | 5.7 | 350 | Dual Three Way Catalytic Converters Dual Heated Oxygen Sensors (two) Sequential Multiport Fuel Injection (Gasoline) Throttle Body Fuel Injection (CNG) Engine Control Module Exhaust Gas Recirculation |

The engine models and codes are listed on attachments.

The ULEV engine certification exhaust emission standards for these engine families in grams per brake horsepower-hour are:

| <u>Non-Methane Hydrocarbons + Oxides of Nitrogen</u> | <u>Carbon Monoxide</u> | <u>Formaldehyde</u> |
|--|------------------------|---------------------|
| 2.5 | 14.4 | 0.050 |

The ULEV engine certification exhaust emission values for these engine families in grams per brake horsepower-hour are: (The values in parentheses are for gasoline.)

| <u>Engine Family</u> | <u>Non-Methane Hydrocarbons + Oxides of Nitrogen</u> | <u>Carbon Monoxide</u> | <u>Formaldehyde</u> |
|----------------------|--|----------------------------|---------------------|
| YBYTH05.7ULV | 1.3 (1.5) | 5.9 (1.5) | 0.0004 (0.001) |
| YBYTH05.7OCA | 1.3 (1.5) | 5.9 (1.5) | 0.0004 (0.001) |

BE IT FURTHER RESOLVED: That the listed engine models are certified to the ULEV standards pursuant to Title 13, California Code of Regulations, Section 1956.8(h) and the incorporated "California Exhaust Emission Standards and Test Procedures for 1987 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles", adopted April 25, 1986, as last amended June 24, 1996.

BE IT FURTHER RESOLVED: That the listed engine models and vehicle models shall be subject to the in-use compliance provisions applicable to 1995 and subsequent model-year medium-duty vehicles set forth in Title 13, California Code of Regulations, Section 2139(c).

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "California Motor Vehicle Emission-Control and Smog-Index Label Specifications" for the aforementioned model-year (Title 13, California Code of Regulations, Section 1965).

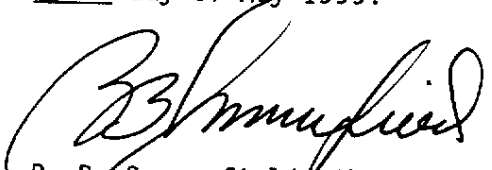
BE IT FURTHER RESOLVED: That the listed engine models comply with the on-board diagnostic system requirements for the aforementioned model-year pursuant to Title 13, California Code of Regulations, Section 1968.1 ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger-Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines").

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2035 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 5th day of May 1999.


R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

2/27/99

E0# A-330-7

Manufacturer: **Baytech Corporation**

Process Code: **New Submission**

EPA Engine Family: **YBYTH05.ZULV**

Manufacturer Family Name: **ULEV**

| 1. Engine Code | 2. Engine Model | 3. BHP@RPM (SAE Gross) | 4. Fuel Rate: mm/stroke @ peak HP (for diesel only) | 5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only) | 6. Torque @ RPM (SEA Gross) | 7. Fuel Rate: mm/stroke@peak torque | 8. Fuel Rate: (lbs/hr)@peak torque | 9. Emission Control Device Per SAE J1930 |
|----------------|-----------------|---------------------------|---|---|--------------------------------|---|---------------------------------------|---|
| 1 | L31-gasoline | 245@4412 | N/A | N/A | 319@2540 | N/A | N/A | 571/EGRTWC/HO2S/10787 |
| 2 | L31-CNG | 211@4476 | N/A | N/A | 275@2850 | N/A | N/A | 571/EGRTWC/HO2S/10787 |
| 3 | L31-CNG or | see above | N/A | N/A | see above | N/A | N/A | see above |

271/EGRTWC/HO2S/10787
571 TBI ECM