

# World Class Dedicated Natural Gas Engines

## Diesel Engines Converted To Natural Gas—Reliable and Affordable



### Mack E7

Engine Models: VMAC, ETECH, ASET AI, ASET AC

Model Years: 1994 to 2006

Fuel: CNG, LNG or Biogas

Applications: Trucks, Buses, Refuse, Drayage, Generators

**Certification:** EPA Certificate of Conformity

Warranty: 3 years/100K miles/2000 hours, whichever occurs first

**Patent No.:** 7,426,920

## **Benefits of Diesel-to-Natural Gas Engine Conversion**

- Use low-cost and clean burning natural gas
- Capitalize on long service life of diesel engine
- Short rate of return (ROR) on conversion cost
- No costly EGR, PDF, SCR-UREA system to maintain
- No diesel emission fluid (DEF) needed
- Near diesel engine performance
- Keep your engine brand, simplifying fleet maintenance
- Durability through use of upgraded engine components

#### **Features**

- Engine overhauled/converted to as-new condition
- Maintenance free three-way catalytic converter
- System sensors maintain emissions and protect engine (OBD)
- Uses high-temperature components, optimized for natural gas
- SAE J1939 and J1587 (ATA) capable for easy engine/transmission/ vehicle integration (Cruise, AT, Dashboard, PTO, Telematics)
- Coil-on-plug ignition—no spark plug wires to replace
- Use with Compressed Natural Gas (CNG), Liquid Natural Gas (LNG), or Renewable Natural Gas—Biogas (RNG)



# World Class Dedicated Natural Gas Engines



#### INITED STATES ENVIRONMENTAL PROTECTION AGENCY OFFICE OF TRANSPORTATION AND AIR QUALITY WASHINGTON, DC 20460



CERTIFICATE OF CONFORMITY ALTERNATIVE FUEL, 2014 MODEL YEAR

Manufacturer:	OMNITEK	
Engine Family: Certificate Number: Intended Service Clas Fuel Type: FELs: <b>G/BHP</b>	EOMNHIL9E7I OMN-ONHWY-14-0I SI: HHDD NATURAL GAS NMHC +NOX: NA NOX: NA PM: NA	Greenhouse Gas Info.  Primary Intended Service Class:  Primary Test Configuration FTP (if applicable):  CO <sub>2</sub> FCL value (g/hp-hr)  CO <sub>3</sub> FEL value (g/hp-hr)  N <sub>2</sub> O FEL value (g/hp-hr)  CH <sub>4</sub> FEL value (g/hp-hr)  Primary Test Configuration Ramped-modal(if applicable):  CO <sub>3</sub> FCL value (g/hp-hr)  CO <sub>2</sub> FEL value (g/hp-hr)
Effective Date: Date Issued:	6/5/2014 6/5/2014	Byron J. Bunker, Director Compliance Division Office of Transportation and Air Quality

Pursuant to Section 206 of the Clean Air Act (42 U.S.C. section 7525), 40 CFR Part 86, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which represent the following motor vehicle engines, by engine family, and is subject to the terms and conditions prescribed in those provisions.

This certificate of conformity covers only those new motor vehicle engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 86 and which are produced during the model vear stated on this certificate of the said manufacturer, as defined in 40 CFR Part 86.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Part 86, Subpart C. Failure to comply with these provisions may render this certificate void ab initio.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 86.096-7, 86.606, and 86.1001 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 86. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 86.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

This certificate applies to the following OEM engine families:

THIS CHITHAGE 49/11-1945, 1MKXHI1.9459, 1MKXHI1.9V60, 1MKXHI1.9V61, 2MKXHI1.9H59, 2MKXHI1.9H63, 2MKXHI1.9H64, 2MKXHI1.9V60, 2MKXHI1.9V60, 2MKXHI1.9V60, 2MKXHI1.9V60, 2MKXHI1.9V65, 2MKXHI1.9V67, 2MKXHI1.9V65, 2MKXHI1.9V65, 2MKXHI1.9V65, 2MKXHI1.9V67, 2MKX

# **Mack Engine Specifications**

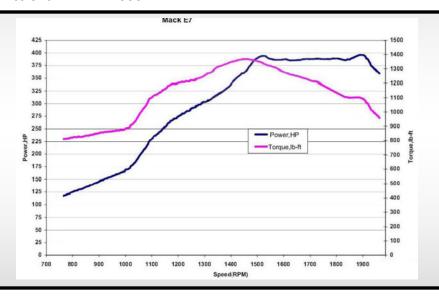
Models: E7 - VMAC, ETECH, ASET AI, ASET AC

Model Year: 1994 to 2006

Power: All ratings up to 400hp @ 1900rpm

Torque: All ratings up to 1360lb-ft @ 1450rpm

Emissions: EPA 2006



## **Our Technology**

High-Temperature Engine Components; Piston Oil Cooling; Inconel Valves w/Stellite; Hardened Valve Seats; 3-Way Catalyst; Electronic Fuel Injection; Coil-on-Plug Ignition System; Electronically Controlled Turbo Boost Pressure; Drive-by-Wire Throttle; Wideband Oxygen Sensor; Exhaust Temperature Sensor Safety System; J1939 and J1587, OBD Self Diagnosis.