

Adaptive Digital Processor



IMPCO®

® Reg. U.S. Pat. & Tm. Off.

ALTERNATIVE FUEL SYSTEMS

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BEFORE YOU BEGIN


WARNING


The ADP processor is intended to be used with volatile gaseous fuels and if improperly installed may create a hazardous condition leading to a fire and/or explosion. Engine emissions, and performance may also be affected by improper installation. Accordingly, the system and associated equipment should be installed only by duly trained and qualified personnel in accordance with the instructions in this manual. **Failure to install the system in accordance with this manual voids the system warranty.**


This entire manual should be carefully studied and understood BEFORE you convert your vehicle. Some installations may require additional parts. Also you must be qualified on, or have access to, automotive test equipment.

The ADP processor is a stand alone feedback unit. It has no interface capabilities to the factory on board computer. Specific computer support modules are available from your IMPCO dealer. CARB regulations require Autotronic's part # 8690 for GM. FORD and CHRYSLER units are also available, but may not be CARB approved. These modules are primarily used to prevent false check engine lights and or false trouble codes that may occur on computer controlled vehicles.

 This symbol means: **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!** If you come across an unfamiliar or potentially hazardous condition, **call your local representative for clarification before proceeding.**

The symbol  is to call your attention to special notes or features. This is to alert you as to unique tools, condition, parts or exceptions you may encounter while installing ADP system on your vehicle.

 To prevent ignition of leaking gaseous fuels which may cause a fire, and/or explosion, avoid open sparks, flames, and operation of electrical devices in or about the engine compartment. Always perform wiring modifications with battery cables disconnected.

 Always follow installation regulations that apply to you. These requirements are found in NFPA-52 for natural gas, and NFPA-58 for LPG. These are U.S. Standards. For Canadian codes see National Standards **CANADA**. Additionally; some states or provinces may also have certain requirements of which you must be aware.

IT IS IMPORTANT TO BE THOROUGHLY FAMILIAR WITH ALL OF THE WARNINGS, AND PRECAUTIONS WE HAVE PROVIDED YOU.

THE INTERNALLY ACCEPTED WARNING SYMBOL  IS IN OUR MANUAL FOR YOUR PROTECTION.

ADP SYSTEM DESCRIPTION

The IMPCO "Adaptive Digital Processor", (ADP) is designed, and manufactured as an advanced electronic closed loop fuel controller for use with LPG (Liquefied Petroleum Gas), CNG (Compressed Natural Gas), or LNG (Liquefied Natural Gas) gaseous fuel systems. The ADP incorporates an engine MAP (Manifold Absolute Pressure) sensor and engine RPM input. Feedback information from the EGO (Exhaust Gas Oxygen) sensor is used to update the digital block learn memory. By storing this information the ADP can then instantly correct for proper air fuel ratios on many different system configurations. This strategy is similar to the fuel control strategies used by OEM (Original Equipment Manufacturers). ADP is economical, easy to install, and will allow alternative fuels to be interchanged with gasoline, or other gaseous fuels on the same vehicle.

- * HIGHLY EFFICIENT DIGITAL DESIGN!**
- * AFFORDS OPTIMUM FLEXIBILITY!**
- * OEM QUALITY!**

ADP TECHNICAL OPERATIONS

The ADP processor was designed to replace, and is interchangeable with the IMPCO AFCP-1. The addition of a manifold vacuum line that is connected to the ADP MAP sensor, and two FCV (Fuel Control Valves) [one for LPG, two for CNG] are the only changes required. The ADP block learn memory is nonvolatile. This means that if the battery is disconnected, the memory will not be lost. The memory can be erased at any time by installing the supplied pin jumper clip. This makes it possible to remove the ADP from one vehicle, and install it on another as your fleet requires.

After the installer adjusts the IDLE fuel mixture the ADP enters a fast learn stage to update the cells within a very short period of time, 24 minutes. After the ADP passes this fast learn stage; corrections slow down to provide stable performance for the rest of the vehicle / fuel system's service life. ADP is designed to operate with IMPCO FB (Feed Back) series carburetors only.