

BASIC FUEL SYSTEM DIAGNOSIS

Introduction

When there is a problem starting or driving a vehicle, two of the most important checks involve the ignition and the fuel systems. The two questions that mechanics attempt to answer first, "is there spark?" and "is there fuel?" will often lead to solving most basic problems. For ignition system diagnosis and testing, please refer to **Section 2** of this manual. If the ignition system checks out (there is spark), then you must determine if the fuel system is operating properly (is there fuel?).

Precautions

Safety is the most important factor when performing not only fuel system maintenance, but any type of maintenance. Failure to conduct maintenance and repairs in a safe manner may result in serious personal injury or death. Maintenance and testing of the vehicle's fuel system components can be accomplished safely and effectively by adhering to the following rules and guidelines:

- **To avoid the possibility of fire and personal injury, always disconnect the negative battery cable unless the repair or test procedure requires that battery voltage be applied.**
- **Always relieve the fuel system pressure prior to disconnecting any fuel system component (injector, fuel rail, pressure regulator, etc.), fitting or fuel line connection. Exercise extreme caution whenever relieving fuel system pressure to avoid exposing skin, face and eyes to fuel spray. Please be advised that fuel under pressure may penetrate the skin or any part of the body that it contacts.**
- **Always place a shop towel or cloth around the fitting or connection prior to loosening to absorb any excess fuel due to spillage. Ensure that all fuel spillage (should it occur) is quickly removed from engine surfaces. Ensure that all fuel soaked cloths or towels are deposited into a suitable waste container.**
- **Always keep a dry chemical (Class B) fire extinguisher near the work area.**
- **Do not allow fuel spray or fuel vapors to come into contact with a spark or open flame.**
- **Always use a backup wrench when loosening and tightening fuel line connection fittings. This will prevent unnecessary stress and torsion to fuel line piping. Always follow the proper torque specifications.**
- **Always replace worn fuel fitting O-rings with new ones. Do not substitute fuel hose or equivalent where fuel pipe is installed.**
- **Due to the possibility of a fire or explosion, never drain or store gasoline in an open container.**