



Preliminary Document

Test Procedure for Factory Specification Fuel Regulation

In the stock vehicle, when part of the factory fuel system is not operating to specification, the other components may be able to compensate allowing the car to operate without much notice or trouble. However, **with the installation of large injectors it is critical that the fuel pressure system be operating at full factory specification.** Please inspect your fuel system for proper functionality before installing larger injectors.

1. Start and warm up vehicle. (Do not induce boost during this test if you have not installed the SECU, and injectors.)
2. Check fuel pressure with handheld or dash mount fuel pressure gauge. Compare directly with a vacuum/boost gauge.
3. The fuel pressure regulator has both a rate (1:1) and target pressure (36 psi). Stated simply, for every pound of vacuum on the manifold, the fuel pressure will drop one pound. This ensures that given a certain pulse width of the injector the same amount of fuel will be dispersed at any vacuum or pressure in the manifold (in other words there won't be vacuum sucking additional fuel from the injectors at idle, because the fuel pressure is lowered that same amount.)

At idle (about 8 lb/in vacuum), you should see 28 psi fuel pressure.

At wide open throttle (0 lb/in), you should see 36 psi fuel pressure.

With the FPR's vacuum line disconnected, you should see 36 psi fuel pressure.

At 10 lb/in boost, you should see 46 psi fuel pressure.

The pressures stated above pertain directly to the D16A6 motor configuration, other engines have higher basic pressures, but the same functionality is easily seen.

If the pressure is higher than specified above, inspect for:

A pinched or clogged fuel return hose or piping.

Aftermarket fuel pump capacity is overwhelming return line system.

Faulty pressure regulator.

Inoperative evaporative emission controls (fuel tank is pressurized).

Pinched or clogged regulator vacuum line.

If the pressure is lower than specified above, inspect for:

Clogged fuel filter.

Worn fuel pump.

Faulty pressure regulator.

Pinched or clogged regulator vacuum line.