**1991 Bentley Turbo R**

**Notes about Bosch Fuel Injection and the very complex fuel system in these cars…**

**Translated into Readable Text from the ancient are arcane official service manual…**

Fuel Circuit

The fuel supply system comprises the primary circuit,

control circuit, and the lambda control circuit (if fitted).

The fuel is at different pressures in various parts of the circuit as follows:

**Fuel Injector Pressure**

3.6 bar

**Primary Circuit**

5.2 bar to 5.8 bar

## Differential Pressure Valves

Upper Chambers

4.6 bar

Lower Chambers

4.7 bar

***Note: Nominal Control Circuit Pressure is variable dependent upon engine temperature!***

0.5 bar to 3.6 bar

## Primary Fuel Circuit

The primary circuit fuel pressure is regulated by a plunger type valve to nominally 5.2 bar to 5.8 bar. In the fuel distributor the fuel initially enters a passage which joins with the lower chambers of the differential pressure valves via a small fixed orifice.

When the engine is operating the fuel flows through the metering slits which are machined into the barrel of the fuel distributor to the upper side of the diaphragm in the differential pressure valves then through injector lines to the injector valves.

The injector valves have an opening pressure of approximately 3.6 bar and are designed to spray finely atomized fuel under all operating conditions.

From the primary fuel circuit a fuel line feeds the cold start injector.  When the engine is stopped, the primary system pressure regulator allows the system pressure to drop rapidly to a pressure governed by the fuel accumulator which is just below the injector opening pressure and maintains it at this level by sealing the return line to the fuel tank.

This seal is effected by a rubber O ring fitted to the valve which is compressed against the fuel distributor housing.

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