

Nozzle Set-up and Calibration, PD Unit Injectors.

Disassembly, Inspection and Nozzle Mounting for PD Injectors.



Unit injectors incorporate the nozzle assembly and a built in high pressure pump producing injection pressure of up to 2000 Bar. Similar to that of a common rail system but with the fuel “rail” chamber only needing a supply pressure of 2.0 Bar. The PD system greatly increases the precision and control over combustion when compared with older fuel injection systems. Specialist equipment is needed just to be able to strip and inspect the injectors due to the complex set up of internal locating plates and pins. With every service we provide a complete strip and inspection of the injector. Parts are then ultra sonically cleaned and worn parts replaced. A nozzle of choice is then assembled into the nozzle assembly holder and NOP1 is setup to insure the

most precise calibration of the injector. We are able to set the PD injectors back to OEM specifications or, for custom or race applications, we can provide a custom pressure setup for your specifications.

Testing and Calibration.



The complete injector is then reassembled and mounted into the 555-2N Injector-Pump System Cam Box and run on our test bench connected to the 555-24LX/EVO Simulator. The following areas of the injector are tested,

- a. Effective Injection Time in ms.
- b. Nominal and Effective start of injection.
- c. Nominal and Effective end of injection.
- d. Current peak absorbed by the electrical solenoid and error message if value is exceeded.
- e. Peripheral Speed of drive shaft whilst pumping.
- f. Test Fluid Temperature measures at the Nozzle Outlet with a maximum protection value.
- g. Visualization of “0” setting for both Cam and the Rotation Mode.
- h. Atomization characteristics at Start Of Injection.

Once the injector has passed either OEM or custom setting specifications the injector is marked with its unique identification number. A performance printout can be supplied on request. All injectors supplied will have a set of new fitment seals and the necessary washers.