

ITU-101

Diesel Common-Rail Injector Testing & Cleaning Unit

For the testing and cleaning of all types of Common-Rail (CRDI) & Conventional Diesel Injectors

Service Benefits

- Diagnose Mechanical Operation Performance
- Diagnose Electrical Coil Condition
- Measure Back-Leak Quantity
- Diagnose Spray Pattern Performance
- Check for Correct Nozzle Opening Pressure [NOP]
- Service Mechanical Failures
- Clean Carbon Deposits
- Repair Clogged Injectors
- Recondition Injector Nozzles

Supported Injector Manufacturers and Types

- Bosch
- Siemens
- Delphi
- Denso
- Coil & Piezo type solenoid Common-Rail injectors

Features:

Spray Pattern Testing

Illuminated spray test tube with ultra intensity LED Lighting that aids the visibility of the atomization and spray pattern of diesel injectors.

Ultra high vacuum port cleans the accumulated fluid fumes from the spray test tube and provides a vivid sight of the injector spray pattern.

The heated injector holder promotes the simulation of realistic operating conditions.

Volumetric Testing

Volumetric Test tubes to measure the injected and returned (back-leak) fluid quantity of the injector. A special nozzle adapter is used to precisely measure the sprayed quantity.

Heated Detergent Cleaning

A specially formulated detergent activates the inert carbon molecules, resins, dust, varnish and gums that accumulate inside the diesel injector.

Heating function works as a catalyst to boost the efficiency of the detergent hence, optimize the cleaning of the injector. An adapter is used while treating the diesel injectors in order to avoid detergent fumes & odors.



Ultrasonic Cleaning

New generation of ultrasonic baths are used for the optimum cleaning of all kinds of deposits, varnishes and gums built-up on the injectors and other parts of the engine. Revolutionary technologies are incorporated in these units, such as “Degas” function to better prepare the cleaning solution and the “Sweep” function [33-40kHz] to boost the power of the ultrasonic waves throughout the injectors.

Injectors are being cleaned in a powerful yet quite ultrasonic bath using a specially engineered cleaning fluid, and heated between 0-90°C, to facilitate efficient cleaning of the injectors, while avoiding long-term damages.

Control Panel

- A user-friendly menu with built-in operating instructions (step-by-step), useful information, explanations and diagnosis.
- Large, Bright Graphic Display
- Display menu language selector.
- Fully programmable (CPU) control panel for future updates and for test-plans.
- Electrical coil diagnosis (Ω).
- Dynamic engine running simulator.
- Easy Access Functions Buttons for common tasks.



Fully automatic or manual use of the menu and all procedures needed to complete a test & cleaning cycle. Capability for the user to program the injector operating parameters, such as: rpm, ms, time, pulses, opening voltage, opening and holding current.

- Injector operating frequency (rpm): 10-16,000 rpm , variable in 10-rpm increments.
- Injector pulse width: 0.01-100 ms in 0.01ms increments.
- Operating time: 5 sec – 30 min per program.
- Injector pulses: 1-10,000 pulses.

Additional features include:

- Fast injector mounting for all types of diesel injectors.
- Dynamic engine running conditions simulator. Acceleration/Deceleration and rich/lean modes simulator.
- Automatic draining of the test/flow tubes between tests.
- Pressure regulator for adjusting the injector pressure (0-1000 bar / 0-14,500 psi).
- Digital and analog pressure gauges.
- Stylish enclosure designed for bench top use.
- Requires 115 psi (8 bar) compressed shop air connection