



Fuel Injector Tester & Cleaner



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Catalogue

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Fuel Injector Tester & Cleaner Users Manual

1. Overview

1.1 Functions and Purpose

Purpose:

The unit is used for checking and cleaning the auto fuel injector and is the first choice for auto's maintenance, curing, even the departments of auto's teaching and researching.

Functions:

- Both the checking and cleaning operation are controlled by micro computer including dealing with dribbling, blocking, pulverization and the injector's angle. The unit can also control the quantity and proportion of fuel spray when injectors are in different running speed.
- The operation items are shown by digital tube with high definition making the operation easy and convenient.
- The powerful ultrasonic cleaning trough (70w) can clean several injectors at the same time. The filter pot of the injector can also be cleaned by ultrasonic wave.
- You can adjust the time, frequency, injecting times, the minimum switch cyc freely in allowable range.
- The patent compound boulder and general bonder base are applicable to US, Japan and Europe vehicles' side-oiling injectors.
- The liquid level of the oil box be shown directly, and the testing liquid can be used circularly.
- The operating pressure can be regulated.
- The main components are all imported ensuring the quality.
- The bright back lights makes it convenient to observe the injector's working situation.

1.2 Working Conditions

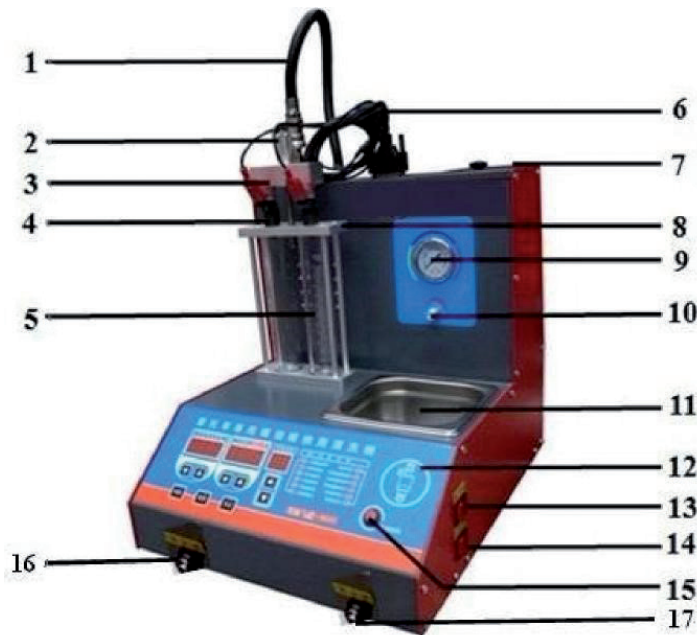
- Power supply: AC220
- Frequency: 50/60 Hz
- Power: <120 W
- Environment temperature: +10 °C -+30 °C
- Relative humidity: <85%
- Magnetic field strength: <400 A/m
- Intermittent working
- No naked fire and combustible gas

1.3 Main Technology Parameters

- Rev range: 0-7500 r/min.
- Oil injecting times: 0-9900 times step length: 100
- Pulse duration: 0-20,0 ms step length: 0,1ms
- Timing: 0-10 min. adjustable
- System pressure: 0-0,5 Mpa adjustable
- Oil tank capacity: 2000 ml
- Ultrasonic cleaning power: 70 W (intermittent working)
- Ultrasonic cleaning frequency: 28 kHz
- Cylinder capacity: 140 ml
- Cylinder reticule accuracy: 0,2 ml
- Measurement: 580 x 540 x 495 mm
- Weight: 18 kg

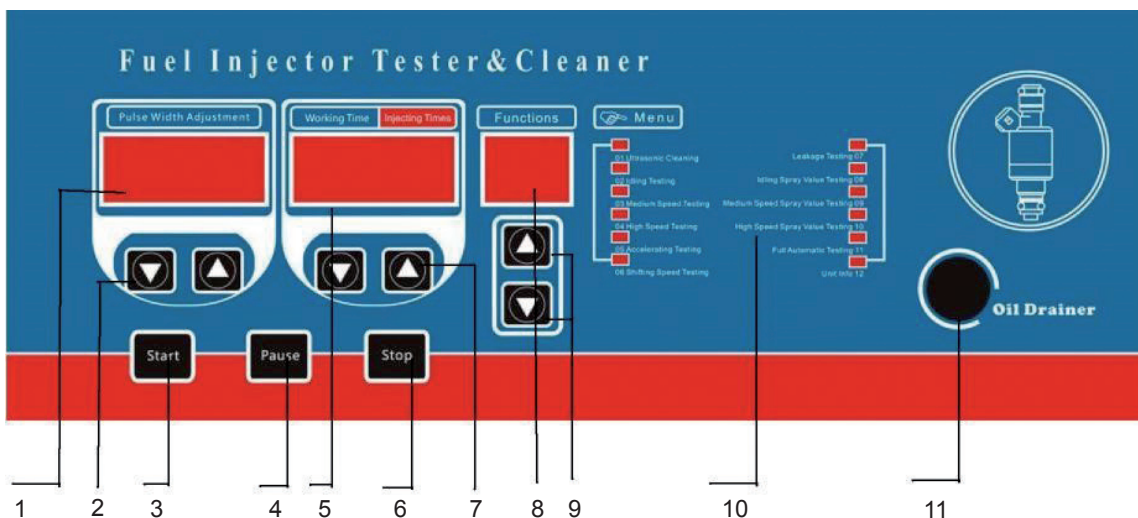
2. Structure

2.1 Structure



1. High-pressure tube
2. Screw rod
3. Fuel distributor
4. Injector
5. Measuring bottle
6. Drive wire
7. Sundries box
8. Inserting plate
9. Pressure meter
10. Pressure adjustment knob
11. Ultrasonic trough
12. Operation panel
13. Ultrasonic switch
14. Heating switch
15. Oil drainer button
16. Testing liquid valve
17. Cleaning liquid valve

2.2 Operation Panel Sketch Map



1. Showing Pulse Duration: displaying the pulse duration as injector working.
2. The keys for regulating the pulse duration.
Press ▲ for increasing
Press ▼ for decreasing
3. Start key: press it to begin a function.
4. Pulse key: press to pulse the choosed function.
5. Showing working time and injecting times.
6. Stop key: Stop the function.
7. Adjusting the working time/injecting times.
Keys for regulating the working time/injecting times.
Press ▲ for increasing
Press ▼ for decreasing
8. Displaying the choosed function/item.
9. Press the ▲ ▼ key to select function items.
10. Functions Menu
11. Oil Drainer Button

Instructions for Oil Drainer Button:

During 11 item, the drain valve will be controlled by programme automatically.

During 2-5 items, close the valve by pressing this button. During 7-10 items, open the valve by pressing this button. After power on the machine, the default status of drain valve is closed, if there is some liquid in measuring bottles, press this button to drain it.

3. Operation Guidelines

3.1 Ultrasonic Cleaning

3.1.1 Preparation

1. Prepare the injectors
step 1: Remove injectors from vehicles.
step 2: Take off the dustproof rubber mat and "O" shape rubber coil on the bottom.
step 3: Check if the coil was damaged, if it was, change for a new one.
step 4: Cleaning the external of the injector with petrol or some cleaning liquid to remove the impurity and smear, the rub-up.
step 5: Blow-drying the injector with purified compressed air.
2. Connect the unit with AC220V, 50Hz power supply. Turn on the switch to run the unit.
3. Fix the cleaning bracket in the ultrasonic cleaning trough. Arrange the injectors on the cleaning bracket.
4. Turn on the Ultrasonic Cleaning Switch which is on the right side of the machine.

3.1.2 Operation Guide

01 Ultrasonic Cleaning

Note: The initial cleaning time is 10 mins, you can reset it before starting.

1. Pour the cleaning liquid into the trough to soak the bracket surface.
2. Put the injectors on the cleaning bracket.
3. Connect the drive line plugs with injectors.
4. Select the ultrasonic cleaning item, press 'Start' key to start.

Heating Function

Cleaning liquid will be heated automatically at the same time (heat to 50 °C in 15 min).
Stop heating when ultrasonic cleaning stops.

Damage will occur if running the function without adding cleaning liquid in the trough!

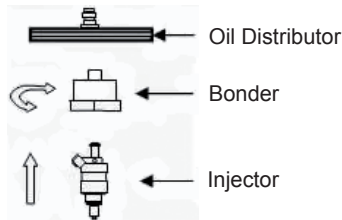
3.2 Diagnostic Testing

02-06 Idling/Medium/High/Accelerating/Shifting/Speed Testing

Simulate engine running condition, test injector in different speed range, check and test injector's injection situation: atomization, spraying angle, spraying amount, spraying uniformity.

3.2.1 Preparation

1. Pour two bottles of the Testing liquid (about 1500 ml) into circular holes above measuring cylinder.
2. Fix the Injector



1. Fix the injector to a balance position on the oil distributor with incidental multiple bonder,
2. Plug the vacancy oil hole with sealer.
3. Lay some lube on the "O" shape rubber coil and compound bonder.
4. Rotate the injector lightly and press it into the compound bonder.
5. Put the oil distributor and injectors flatly on the measuring bottles, then fasten by the screw rod.

3.2.2 Operation Guide

1. Connect oil distributor and oil-output pipe with rapid connector, connect driver wires.
2. Press ▼ ▲ to select 2-6 items, turn the knob left to make the pressure in the lowest level.
3. Press 'Start' to start the function.
4. Turn the knob right slowly to increase the pressure to 0,25 MPa and check if there was a leaking on connecting point of bonder.

If a leaking was found, regulate again till wholly sealed.

07 Leaking Testing

1. Fix the injectors.
2. Press ▼ ▲ to select the Leakage Testing item.
3. Regulate pressure to 0,3 MPa.
4. Press 'Start' to start.
5. Checking injectors' leak tightness.
6. Pick out the unqualified ones to clean again.

If it was still unqualified after many times' cleaning, exchange for a new injector!

Setting for Injecting Times

1. Press ▼ ▲ (7) to select the idling/medium/high speed injecting times setting items.
2. Press 'Start' to start.

Keep observing the spray shape and amount as running. The function will stop automatically as timing out.

08-10 Idling/Medium/High Speed Spray Value Testing

1. Press ▼ ▲ (9) to select 08-10 item.
2. Press ► to run these functions.
3. Pause or stop it when liquid level reaches 2/3 of cylinder.
4. Checking the discharge proportionality in different working states.
5. Pick out the unqualified ones to clean again.

If it was still unqualified after many times' cleaning, exchange for a new injector!

11 Full Automatic Testing

1. Press ▼ ▲ (9) to select Full Automatic Testing.
2. The machine will run item 02, 03, 04, 05, 08, 09, 10 items automatically, and there will be a delay after 08, 09, 10 finished, in order to drain the testing liquid in measuring bottles.

12 Device Info

To check the serial number.

4. Tidy and Maintenance

Tidy

step 1: Shut down the power supply.

step 2: Put the liquid back to the original bottle, clean the machine with dry soft cloth.

step 3: The testing liquid in tank should be put back to original bottles for preservation.

Maintenance

Exchange cleaning liquid

After being used for long time, the liquid must be changed to avoid that the injector being blocked by the impurity.

Exchanging Process

step 1: Open the testing liquid valve to let all the liquid out.

step 2: Pour some new liquid in to wash the inside and release.

step 3: Fix the screw cap on, add two bottles of new cleaning liquid.

Exchange Protector Tube

step 1: The protector case is on the unit's power receptacle.

step 2: Open the case, you will see the tube.

step 3: Change for a new one if the tube was melted.

5. Notice

1. The measuring cylinders are made of quartz glass, and fragile. Please avoid striking!
2. Before start the unit, please check the power supply, connector plugs and protector tube to ensure that they are in good condition.
3. Warranty will cancel if dismantle the unit without permission.
4. Damage will occur if running the ultrasonic cleaning function without special cleaning liquid.
5. Before exchanging for new testing liquid, the used ones must be released entirely, then adding two bottles (1500 ml) for using.
6. Taking use of the special testing or cleaning liquid which designed for unit, for other ones will flake the surface painting coat off.
7. Never using coal oil, petrol or thinner for as cleaning or testing liquid.
8. Never mix the testing and cleaning liquid for usage.
9. The trouble caused by using other liquid or liquid is beyond the repairing guarantee range.

6. The Cleaning and Testing Liquid

Safety and iniquity, the liquid are specially designed for the unit, with high stability and oxidation resistance, resuming injector unimpeded, normal spray, eliminate the troubles of idling unsteadiness, accelerating hard, and improve combustion performance, saving the petrol cost.

To avoid burning the unit's core oil pump and fretting the oil piping system, the liquid are kept from any acid or base component. from any acid or base component.