

ANCEL AJ600

ANCEL AJ600 Fuel Injector Cleaner & Tester User Manual

Model: AJ600

1. INTRODUCTION

The ANCEL AJ600 Fuel Injector Cleaner and Tester is an advanced automotive tool designed to maintain and diagnose the fuel injection system. The injection performance of the injector is critical for the overall power and thermal efficiency of an engine. Over time, injectors can experience a decline in efficiency due to carbon buildup, leading to increased fuel consumption and reduced engine power. This machine utilizes ultrasonic technology for powerful cleaning and offers multiple testing functions to ensure optimal injector performance, contributing to better fuel efficiency and engine health.

2. PRODUCT OVERVIEW

The ANCEL AJ600 is a professional-grade injector cleaner and tester, featuring a robust design and intuitive controls. It is capable of handling up to 6 injectors simultaneously, providing comprehensive cleaning and diagnostic capabilities.

2.1 Key Features

- **Advanced Ultrasonic Cleaning:** Utilizes penetrability and cavitation impact waves for thorough removal of stubborn carbon deposits from injectors.
- **Multi-Test Functions:** Supports resistance test, uniformity/sprayability test, leakage test, injecting flow test, auto test, and low resistance injectors test.
- **On-Vehicle Cleaning:** Capable of cleaning injectors while still installed on the vehicle.
- **Wide Compatibility:** Features replaceable composite fittings suitable for various types of automotive engine injectors.
- **User-Friendly Operation:** Designed for ease of use with adjustable injection numbers, test time, operating frequency, and minimum switching cycle.
- **Safety Features:** Unique fuel circuit depressurization technology prevents equipment damage or personal injury during sudden shutdowns.
- **Real-Time Monitoring:** Microcomputer automatic control and digital display technologies allow for real-time monitoring of cleaning and testing processes.
- **Humanization Design:** System pressure can be quickly restored to default values.

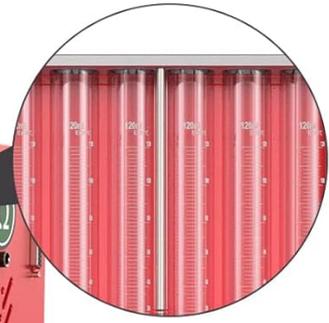
2.2 Components

The ANCEL AJ600 unit consists of the main machine and an external ultrasonic cleaner. Key parts include the control panel, measuring cups, and power switch.

Ultrasonic Cleaner



Measuring Cup



Control Panel



Power Switch

Figure 1: Main components of the ANCEL AJ600.



Figure 2: Front view of the ANCEL AJ600 unit.

3. SPECIFICATIONS

Parameter	Value
Main Unit Power Supply	AC220V±10% 50Hz/60Hz or AC110V±10% 60Hz
Input Power	230W
Ultrasonic Cleaner Power	100W
Resistance Test Accuracy	0.1Ω
Simulated RPM Range	100-9900rpm, step:10rpm
Time Range	5-300s, step:5s
Pulse Width	0.1-25ms, step:0.1ms
Fuel Tank Capacity	2000 ml

Parameter	Value
Work Pressure	0-7bar

3.1 Working Conditions

- Temperature: -10 to +40°C
- Relative Humidity: <85%
- Intensity of Outer Magnetic Field: <400A/m
- No naked flame within 2m of the unit.



Figure 3: Voltage compatibility for the ANCEL AJ600.

4. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the equipment:

- Ensure the unit is connected to the correct power supply (110V or 220V) as indicated on the machine.
- Do not operate the machine near open flames or highly flammable materials.
- Use only recommended cleaning and test liquids.
- Wear appropriate personal protective equipment, such as gloves and eye protection, during operation.
- Ensure proper ventilation in the work area.
- Do not attempt to disassemble or repair the unit yourself. Refer to qualified service personnel.
- Keep the unit away from water and moisture.
- The unique fuel circuit depressurization technology automatically depressurizes the machine in case of sudden shutdown, enhancing safety.

5. SETUP

5.1 Unpacking and Checking Contents

Upon receiving your ANCEL AJ600, carefully unpack all components and verify against the packing list. Ensure all parts are present and undamaged.

WHAT IS IN THE BOX?

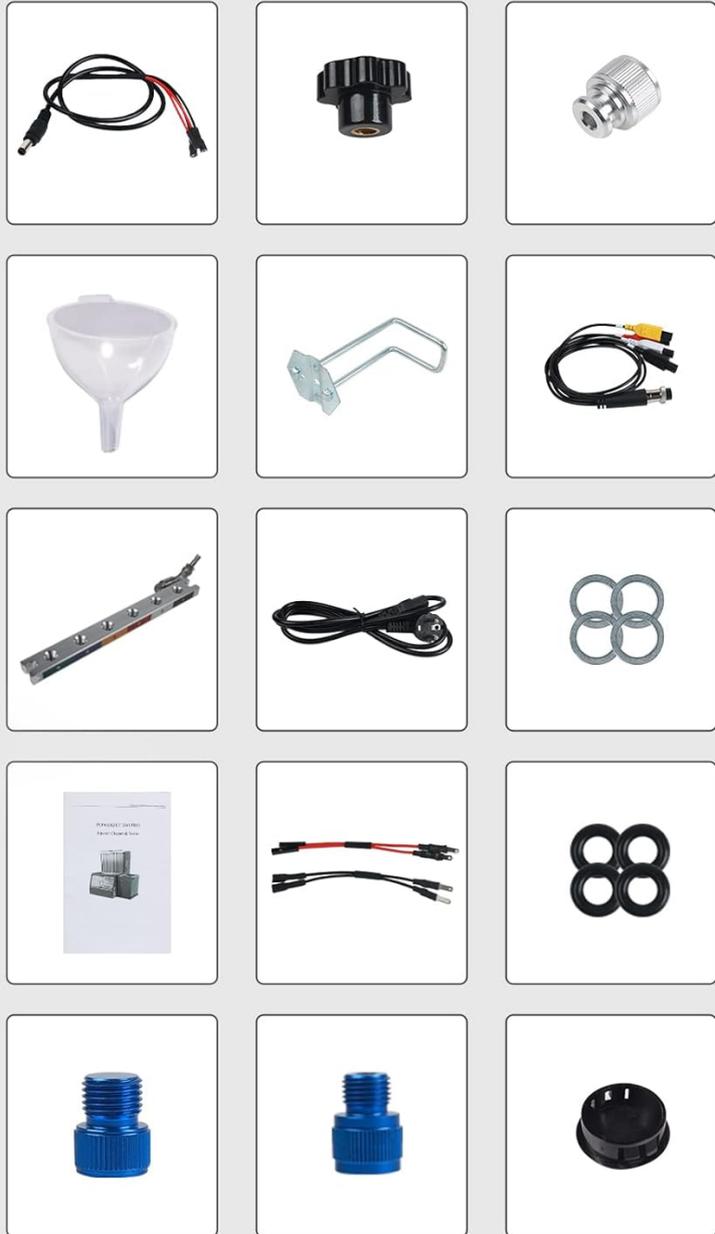


Figure 4: Contents included in the ANCEL AJ600 package.

5.2 Initial Connection and Preparation

1. **Install Injectors:** Securely install the fuel injectors into the fuel separator.
2. **Install Fuel Separator:** Attach the fuel separator assembly to the main unit using the provided bolts.
3. **Connect Fuel Line:** Connect the fuel line from the main unit to the fuel separator.
4. **Connect Pulse Lines:** Connect the pulse signal wires from the main unit to each injector.
5. **Add Test Liquid:** Pour the appropriate test liquid into the designated reservoir on the main unit. The test liquid level can be observed in the display window.
6. **Power Connection:** Connect the power cable to the unit and a suitable power outlet (110V or 220V). Turn on the main power switch.

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Video 1: Demonstrates the setup process, including injector installation, fuel line connection, and initial power-up of the ANCEL AJ600.

6. OPERATING INSTRUCTIONS

The ANCEL AJ600 offers various modes for cleaning and testing fuel injectors. Ensure all safety precautions are followed

before operating the machine.

6.1 Ultrasonic Cleaning

Ultrasonic cleaning effectively removes stubborn carbon deposits from injectors.

1. Clean the outside of the injector with gasoline or a cleaning fluid before placing it in the ultrasonic cleaner.
2. Place the injectors in the ultrasonic bath after ensuring their exterior is free of dirt.
3. Pour in the appropriate detergent for injectors into the ultrasonic cleaner.
4. Connect the pulse signal wire to the ultrasonic cleaner.
5. Turn on the ultrasonic system and select the ultrasonic cleaning function on the control panel to begin the cleaning process.

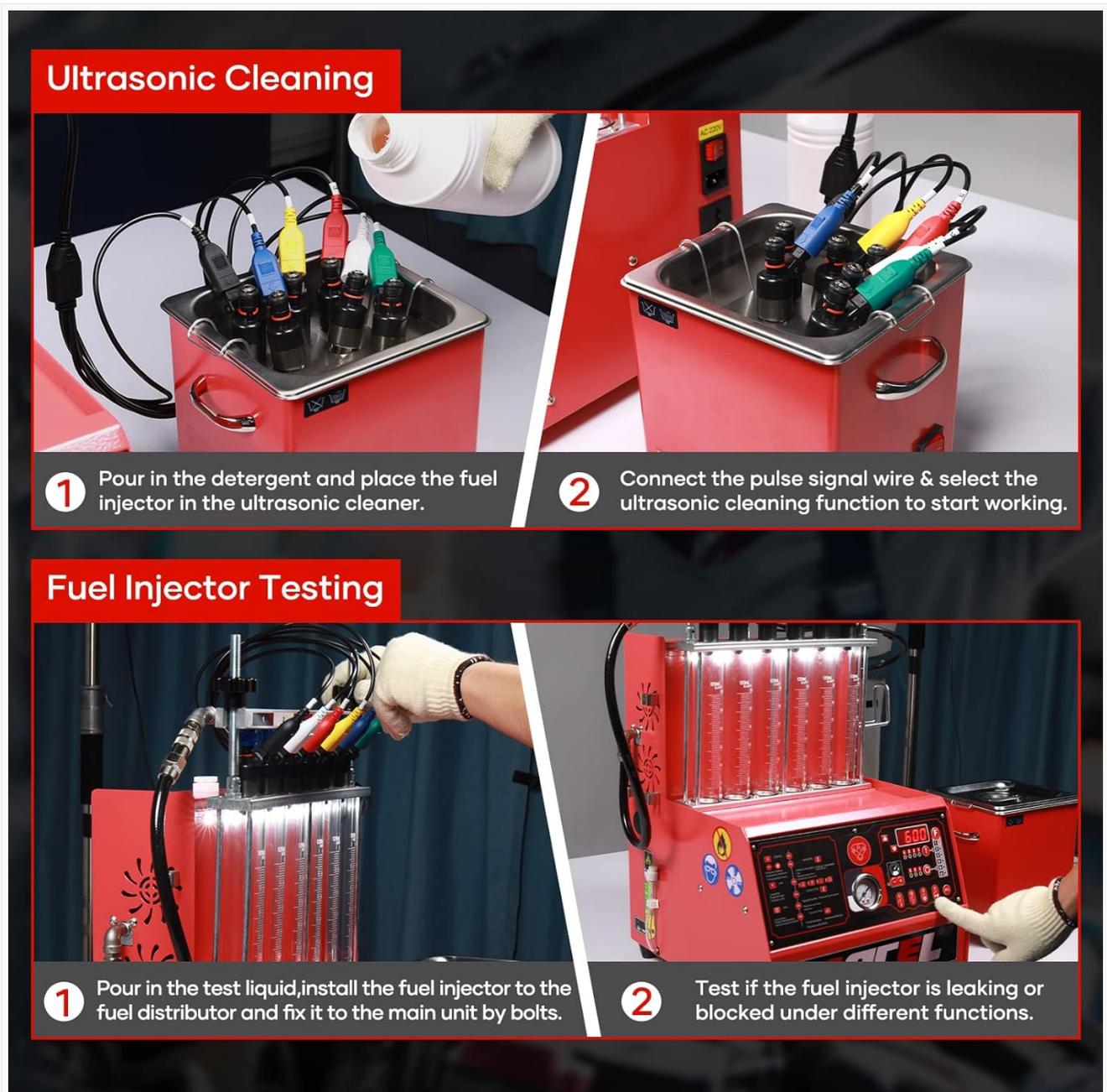


Figure 5: Steps for Ultrasonic Cleaning.

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Video 2: Demonstrates the ultrasonic cleaning process for injectors.

6.2 Fuel Injector Testing

The ANCEL AJ600 provides several testing modes to diagnose injector performance.

1. **Resistance Test:** Check the electrical resistance of each injector.
2. **Uniformity / Sprayability Test:** Observe the spray pattern and uniformity of each injector. Adjust RPM settings on the control panel to simulate various engine speeds.
3. **Leakage Test:** Check for any fuel leakage from the injectors under pressure.
4. **Injecting Flow Test:** Measure the volume of fuel injected by each injector over a set period to assess flow rate.
5. **Auto Test:** Perform a sequence of tests automatically to get a comprehensive diagnostic report.
6. **On-Vehicle Cleaning:** This function allows for cleaning injectors without removing them from the vehicle.



Figure 6: Various testing functions of the ANCEL AJ600.

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Video 3: Demonstrates various testing modes including endurance, spray uniformity, leak, injection flow, and automatic tests.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your ANCEL AJ600 unit.

- After each use, ensure the unit is powered off and disconnected from the power supply.
- Drain any remaining test liquid from the system. The unit features automatic fuel drain during tests, but manual

draining may be required for complete emptying.

- Clean the exterior of the machine with a soft, damp cloth. Avoid using abrasive cleaners or solvents.
- Regularly inspect all hoses and connections for wear or damage. Replace as necessary.
- Store the unit in a clean, dry environment, away from direct sunlight and extreme temperatures.
- The bottom of the unit is designed with a drawer for parts, making organization easier.

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Video 4: Demonstrates the recycling of cleaning liquid, a key maintenance step.

8. TROUBLESHOOTING

This section provides general guidance for common issues. For complex problems, please contact customer support.

- **Unit does not power on:**

- Check if the power cable is securely connected to both the unit and the power outlet.
- Verify that the power switch is in the "ON" position.
- Ensure the power outlet is functional.

- **Injectors not spraying or spraying unevenly:**

- Confirm that the fuel line and pulse lines are correctly connected to all injectors.
- Check the test liquid level in the reservoir.
- Ensure the selected test mode and parameters (RPM, pulse width) are appropriate for the injectors.
- The injectors may be severely clogged and require additional ultrasonic cleaning cycles.

- **Leakage observed during testing:**

- Verify that injectors are properly seated and sealed in the fuel separator.
- Check O-rings for damage or improper installation.
- Ensure all connections are tight.

- **Ultrasonic cleaner not functioning:**

- Ensure the ultrasonic cleaner is properly connected to the main unit and powered on.
- Check if the cleaning mode is selected on the control panel.

9. WARRANTY AND SUPPORT

The ANCEL AJ600 6-cylinder Injector Cleaner comes with a warranty to ensure your satisfaction. ANCEL offers 7x24 hours friendly customer service to assist with any issues or inquiries you may have. There is no need to pay extra for warranty service.

For technical support, troubleshooting assistance, or warranty claims, please contact ANCEL customer service through the contact information provided in your product packaging or on the official ANCEL website. Please have your model number (AJ600) and purchase details ready when contacting support.