LAUNCH CNC602A

LAUNCH CNC602A Injector Cleaner and Tester User Manual

MODEL: CNC602A

1. Introduction

The LAUNCH CNC602A Injector Cleaner and Tester is a professional automotive tool designed for comprehensive maintenance of fuel injectors. It performs simultaneous cleaning and testing of multiple injectors, ensuring optimal engine performance and fuel efficiency. This manual provides detailed instructions for safe and effective operation of the device.

2. Safety Information

- Always operate the unit in a well-ventilated area.
- Do not smoke or use open flames near the cleaning or testing fluids.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the unit is properly grounded before operation.
- Use only recommended cleaning and testing fluids.
- Do not place anything on the control panel that could interfere with operation or cause damage.
- In case of a damaged power supply or short circuit, discontinue use immediately.

3. Product Components and Package Contents

The LAUNCH CNC602A comes with a comprehensive set of accessories to facilitate various cleaning and testing procedures.

Image: Various accessories and cables included with the LAUNCH CNC602A Injector Cleaner and Tester.

Package List:

- 105020217 CNC pulse signal connection cable 1, T=0.5
- 105020218 CNC pulse signal connection cable 2, T=0.8
- 103260037 Ultrasonic cleaner assembly 100W
- 106030038 On-vehicle adaptor package (tool kits)
- 107010428 CNC-602A user manual (En&Ch)
- 103250013 Top-supply connector 1
- 103250015 Swiss thread adaptor for fuel top-supply injector
- 103250016 Coarse thread adaptor for fuel top-supply injector
- 103250018 CNC-601/801 Hexangular stopper
- 104990012 CNC-801 BUICK injector adaptor
- 199010019 Injector testing liquid (pick out)
- 307030024 Injector detergent (pick out)

4. Setup

Before operating the unit, ensure it is placed on a stable, level surface and connected to a suitable power supply (AC110V±10%, 50/60Hz).

Image: Power switch and socket for connecting the unit to a 110V AC power supply.

Initial Steps:

1. **Connect Power:** Plug the unit into a grounded AC110V power outlet.
2. **Install Drain Valve:** Attach the cleaning/testing agent discharge valve to the designated port.
3. **Prepare Ultrasonic Bath:** Place the ultrasonic cleaning assembly into its designated slot.
4. **Install Signal Wires:** Connect the pulse signal connection cables to the unit.

5. Operating Instructions

The CNC602A offers both ultrasonic cleaning and various testing functions for fuel injectors.

Image: The control panel with function selection, pulse width adjustment, and pressure controls.

5.1. Ultrasonic Cleaning Procedure

1. **Pre-clean Injectors:** Clean the injector's exterior with gasoline or a suitable cleaning liquid before placing them in the unit.
2. **Place Injectors:** Position the injectors in the ultrasonic bathtub.
3. **Add Cleaning Fluid:** Pour cleaning fluid into the ultrasonic bathtub, ensuring injectors are submerged.
4. **Connect Pulse Signals:** Attach the pulse signal cables to the injectors.
5. **Activate Ultrasonic System:** Turn on the ultrasonic system. The pulsed energy, combined with the cleaning fluid, will dislodge carbon and impurities from inside the injectors.
6. **Heat Mode (Optional):** If desired, activate the heating mode for enhanced cleaning.

Image: Injectors undergoing ultrasonic cleaning in the dedicated bath.

5.2. Fuel Injector Testing Procedure

1. **Mount Injectors:** Secure the cleaned injectors onto the main machine's test bench.
2. **Add Test Fluid:** Pour the dedicated testing fluid into the fuel tank (4700ml capacity). Ensure the fluid level is within the specified range.
3. **Connect Power and Signal:** Ensure all injectors are correctly connected for power and pulse signals.
4. **Select Test Function:** Use the control panel to select the desired test function (e.g., Idle Speed Test, Leakage Test, Sprayability Test).
5. **Adjust Parameters:** Set simulated RPM, time, and pulse width as required for the selected test.
6. **Start Test:** Initiate the test and observe injector performance in the graduated cylinders.
7. **Adjust Pressure:** Use the pressure adjustment knob to modify system pressure during testing as needed.

Video: Demonstration of cleaning and testing 6 injectors simultaneously using a similar machine. This video illustrates the general process of injector cleaning and testing.

Available Testing Functions:

- **Ultrasonic Cleaning:** Removes carbon deposits and impurities using ultrasonic vibration.
- **Idle Speed Test (0-20ms):** Simulates engine idling speed to test injector state.
- **Medium Speed Test (0-7.5ms):** Simulates medium engine speed to test injector state.
- **High-Speed Test (0-4ms):** Simulates high engine speed to test injector state.
- **Acceleration Test:** Simulates vehicle acceleration to test injector performance.
- **Shift Speed Test:** Simulates vehicle shifting state to test injector working performance.

- **Leakage Test:** Checks the sealing condition of the fuel injector.
- **Idle Speed Sprayability Test:** Tests spray performance at engine idling state.
- **Medium Speed Sprayability Test:** Tests spray performance at medium engine speed.
- **High-Speed Sprayability Test:** Tests spray performance at high engine speed.
- **Reverse Flush:** Cleans injectors by flowing test liquid from outlet to inlet, removing internal dirt or strainers (for top fuel supply injectors).
- **No-Disassembly Cleaning:** Direct cleaning without disassembling injectors (requires special adapters).

6. Maintenance

Regular maintenance ensures the longevity and accuracy of your LAUNCH CNC602A unit.

1. **Fluid Management:** After each use, drain all cleaning and testing fluids from the unit. Store fluids properly according to their safety data sheets.
2. **Clean Unit:** Wipe down the exterior of the machine with a soft, damp cloth. Avoid using harsh chemicals that may damage the surface or internal components.
3. **Inspect Components:** Regularly check all hoses, connections, and adapters for wear, damage, or leaks. Replace any damaged parts immediately.
4. **Storage:** Store the unit in a clean, dry environment away from direct sunlight and extreme temperatures.

Image: Fuel intake port and warning label, emphasizing proper fluid handling.

7. Troubleshooting

This section addresses common issues you might encounter during operation.

- **Unit does not power on:** Check power cable connection and ensure the power switch is in the 'ON' position. Verify the power outlet is functional.
- **No ultrasonic cleaning action:** Ensure the ultrasonic cleaning function is selected and the cleaning fluid level is adequate. Check connections to injectors.
- **Inconsistent spray pattern/flow:** Verify that injectors are clean and free of blockages. Check for proper seating of injectors and adapters. Ensure correct pressure settings.
- **Fluid leakage:** Inspect all connections, hoses, and O-rings for proper sealing. Tighten any loose fittings.
- **Pressure gauge not responding:** Check the oil supply hose connection and ensure the pressure adjustment knob is functioning correctly.

8. Specifications

Feature	Specification
Power Supply	AC220V±10%, 50/60Hz; AC110V±10%, 50/60Hz
Input Power	250W
Ultrasonic Cleaner Power	100W
Simulated RPM Range	10-9990rpm; step: 10rpm
Time Range	1-9999s
Pulse Width	0.5-25ms; step 0.1ms
Fuel Tank Capacity	4700ml
Dimensions	385mm×410mm×500mm
Weight	About 35kg

9. Warranty and Support

The LAUNCH CNC602A Injector Cleaner and Tester comes with a**1-YEAR WARRANTY** for damages caused by non-human factors. For any needs or support, please contact customer service. We aim to respond within 24 hours.