

# **Engine Carbon Cleaner**

**Operation Manual Book**

## **1.Introduction**

Engine Cleaner is now using the world's most popular method of auto-care without removing the engine and any components, which is supplied by the powerful equipment and technology guarantee. This equipment and technology has been practiced for a wide range of fields and proved to be very effective. It is perfect throughout the working principles, choosing the spare parts and accessory parts and disposing solvents. Best effect will show with good operation skills.

Cleaning machine connects to the engine using specific vehicle adapters without removing the engine or any engine components. Necessary solvent is being pumped inside the engine through the machine, which effectively removes away the carbon, gum and other contaminants in the fuel system, combustion system to make cleaned inside cylinder and recover the engine's performance and reduce the exhaust gas like HC, CO etc. Reduce maintenance costs and increase engine's life.

## **2. Cautions**

2.1. Please read the Manual Book carefully and fully understand it before use.

2.2. There must be fireproof and fire-fighting equipment at the workplace. Keep the cleaning solvent away from flame and smoke. Keep the working area in good air ventilation. Please switch off the power supply and clean the machine when finish working at ordinary time.

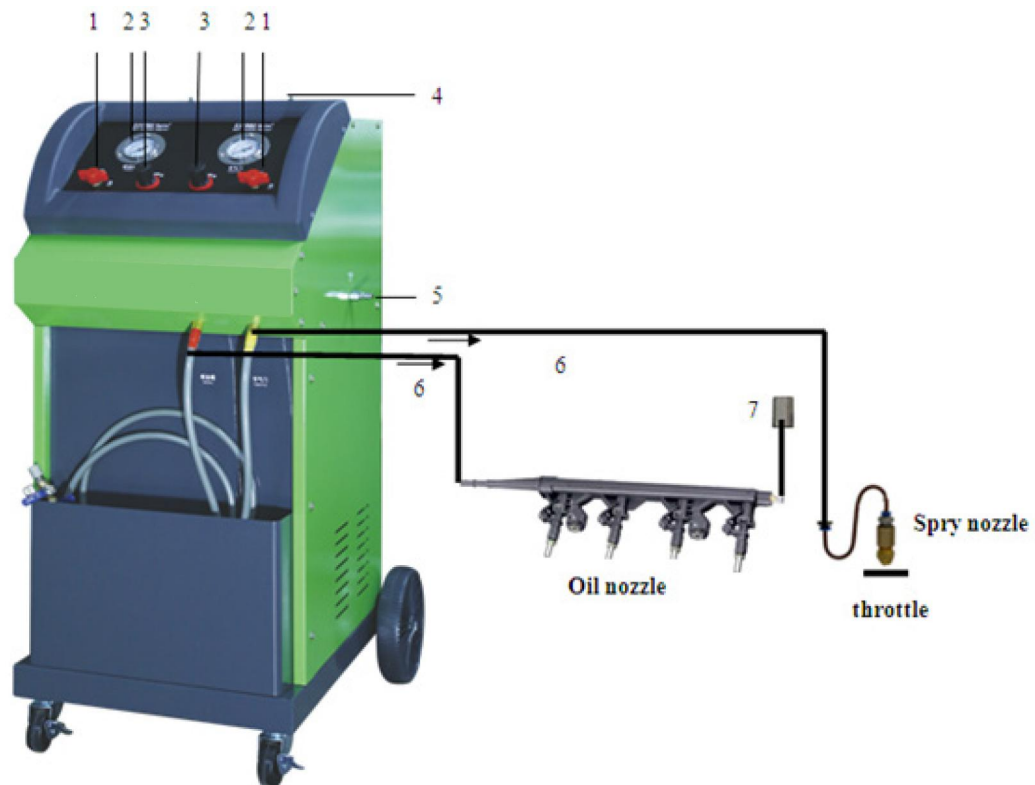
2.3. Avoid direct sunshine on the machine. Don't place the cleaner in moist surrounding, but an airy and dry place.

2.4. Working sparks, smoke and fire are strictly prohibited near the machine.

2.5. Operator should wear goggles to prevent the liquid spatter into eyes.

2.6. While fuel and cleaning solvent spatter to the engine and electric components of vehicle clean and turn engine off immediately.

### 3. Structure



(1). Transfer valve for clean (2). Pressure meter (3). Pressure regulator for clean (4). Fill solvent inlet (5). Air compressed pipe joint (6). Solvent outlet hose (7). bulkhead

### 4. Specification

- 4.1 Work on the gasoline fuel systems;
- 4.2 Solvent tank capacity: 800 ml x2;
- 4.3 Input air pressure: 114PSI (6kg/cm<sup>2</sup>);
- 4.4 Air compressor driven ;

### 5. Operating process of cleaning

#### Preparation before working

- 5.1 Close the transfer valve (1). Turn the regulator (3) left (arrow -) to the lowest position;
- 5.2 Pour the solvent into the solvent tank from inlet (4) and screw tight cover;
- 5.3 Connect air compressor to the jointer (5) and open the valve (1);

#### Cleaning operating process

- 5.4 Confirm the engine off and brake;

- 5.5 Open the fuel tank cover. Decrease the fuel pressure in the fuel line;
- 5.6 Find out fuel supply hose of the engine and take apart the hose. Choose the proper adapter or rubber hose from the toolbox to link the solvent outlet hose (6) of the cleaner to fuel supply hose of the engine. In this case the engine is supplied fuel by the cleaner totally;
- 5.7 Seal the fuel supply hose (from the vehicle's fuel pump) with the bulkhead or cut off the electric supply of the vehicle's fuel pump in case of fuel leakage;
- 5.8 Open Transfer valve (1). Regulate the (3) to turn right the knob (arrow +) to make the pressure increase slowly;
- 5.9 Check if the joint in good condition between cleaner and engine, if find leakage, regulate the pressure to the lowest, find the cause and re-install it;
- 5.10 Start engine and begin cleaning;
- 5.11 After cleaning finished. Engine is off automatically . Put engine switch in OFF position;
- 5.12 Remove the adapters and hose; recover the joint with the engine. Start the engine and check if there is leakage. Remember to cover the tank after cleaning;
- 5.13 Clean the working place;

### **Throttle intake manifold cleaning**

- 5.14 Filling the throttle intake manifold clean solvent into the other tank and tighten the cover 4;
- 5.15 Turn the valve (1) in OFF position. Regulate the pressure of (3) to about  $2\text{kg/cm}^2$  ;
- 5.16 Install the spray nozzle to the solvent outlet hose (above picture showed);
- 5.17 Take apart intake hose which connected with throttle. Start engine;
- 5.18 Keep spray nozzle alignment throttle. Open the valve (1);
- 5.19 Cover up throttle with intake hose after ejective mist appeared;
- 5.20 Close the valve (1) after solvent all sprayed out. Take off the nozzle;
- 5.21 Recover the joint of the intake hose;
- 5.22 Remove the adapters; recover the joint with the engine. Start the engine again and check if there is leakage;

### **NOTE:**

1. The valve (1) must be in OFF position after each cleaning;
2. Turn the regulator (3) left (arrow -) to the lowest position after each cleaning;
3. Discharge the pressure of the solvent tank (4) to zero after each cleaning;

## Value of fuel supply system of kinds of automobile

automotives	Engine	Fuel supply pressure kg/cm <sup>2</sup>
<b>MAZDA</b>	<b>323</b>	<b>2.0-2.2</b>
	<b>626</b>	<b>2.5-2.9</b>
	<b>929</b>	<b>2.5-2.9</b>
<b>BMW</b>	<b>528</b>	<b>2.7-2.9</b>
<b>VOLVO</b>	<b>VOLVO</b>	<b>2.7-2.9</b>
<b>NISSAN</b>	<b>BLUEBIRD</b>	<b>2.5</b>
	<b>MAXIMA</b>	<b>2.5</b>
	<b>300ZH</b>	<b>2.06-2.55</b>
<b>FORD</b>	<b>TEMPO 2.3L</b>	<b>2.8</b>
	<b>LINCOLN TOWN CAR</b>	<b>2.6-3.08</b>
<b>GM</b>	<b>BUICK PARK AVENUE</b>	<b>2.9-3.3</b>
	<b>BUICK CENTURY</b>	<b>2.9-3.3</b>
	<b>CADILLAC 5.7</b>	<b>2.9-3.3</b>
	<b>CHEVROLET LUMINA</b>	<b>2.3-3.0</b>
	<b>CHEVROLET CORSICA</b>	<b>2.5-3.0</b>
<b>MITSUBISHI</b>	<b>V6</b>	<b>3.5</b>
<b>FAW-VOLKSWAGEN</b>	<b>JETTA GT</b>	<b>2.7-2.9</b>
<b>SHANGHAI VOLKSWAGEN</b>	<b>SANTANA 2000</b>	<b>2.2-2.65</b>
<b>DAEWOO</b>	<b>DAEWOO</b>	<b>2.8-3.0</b>
<b>HYUNDAI</b>	<b>SONATA</b>	<b>2.65-2.75</b>
<b>TOYOTA</b>	<b>TOYOTA 3.0</b>	<b>2.84</b>
	<b>PREVIA</b>	<b>2.7-3.3</b>
	<b>LEXUS 300 LS400</b>	<b>2.65-3.04</b>
	<b>CAMRY 3.0</b>	<b>2.65-3.04</b>
	<b>LAND CRUISER</b>	<b>3</b>
	<b>COROLLA</b>	<b>2.7-3.1</b>
<b>HONDA</b>	<b>ACCORD 2.0, 2.2</b>	<b>2.85</b>
	<b>CIVIC 1.5L</b>	<b>2.55-2.85</b>
	<b>LEGEND 3.2L</b>	<b>2.7-3.04</b>
<b>CHRYSLER</b>	<b>BJ CHEROKEE 213</b>	<b>2.73</b>
	<b>DODGE 3.3L</b>	<b>3.37</b>
	<b>DODGE CARAVAN</b>	
<b>AUDI</b>	<b>6-CYLINDER</b>	<b>2.8-3.0</b>
	<b>4-CYLINDER, 5-CYLINDER</b>	<b>4.5-5.0</b>