# **Radiator Cooling System Cleaner**

Operation Manual Book

#### 1. Attentions

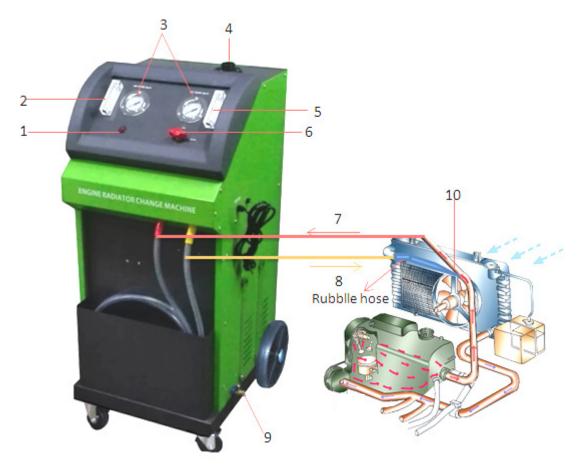
- 1.1. Read the Manual Book carefully and fully understands it before use.
- 1.2. Operator should wear goggles and gloves to prevent the liquid spatter on the eyes and skin.
- 1.3. Before cleaning operation, check and confirm no leakage in water tank, water line and body.
- 1.4. Open water tank only when water tank liquid become cooling to protect from boiling.
- 1.5.Protecting from over pressure to damage water tank of vehicle, Air and water pressure must be less than 0.2Mpa.

#### 2. Features

Power supply: 220V-150w
 Pressure gauge: 0~2kg/cm²

Fluid outlet hose: 1.8 m
Fluid return hose: 1.8 m
New/used fluid tank: 20L×2

#### 3. Structure



1. Switch 2.New fluid window 3.Pressure meter 4.Add cover 5.Used fluid window 6.Valve 7.Inlet hose 8.Outlet hose 9.Drain valve 10.Radiator pipe

## 4. Operating process

#### **Prepare**

# 4.1 Prepare the cleaning agent

Preparation for water tank solvent and special antifreeze fluid or coolant.

## 4.2 Pipe connection

Remove the radiator upper pipe, choose the proper rubber hose from the toolbox, connect the water tank end with outlet liquid hose(8) of the machine.

Link inlet liquid hose(7) to the upper pipe of engine.

#### 4.3 Power connection

Connect the power supply with 220V.

#### **Filling**

## 4.4 Filling cleaning agent

Confirm the engine off and in cooling state. Fill the cleaning agent into the water tank of engine and tighten the cover.

# 4.5 Filling the antifreeze liquid

Fill the antifreeze liquid from filler into the water tank of the machine. Amount as following direction ( I )

	Vehicle's cylinder No.	Added fluid (Lit.)
I	3cylinders	4
	4 or 6cylinders	6
	8 cylinders	8

	Vehicle's cylinder No.	Time(min.)
II	3 cylinders	8
11	4 or 6cylinders	12
	8 cylinders	15

#### Circulation

- 4.6 Keep the valve 6 to clean position.
- 4.7 Start the engine.
- 4.8 Start the machine after the water tank thermostat is turned on with the normal temp. and having used fluid through inlet liquid hose. Circulate realized between the engine and Hose 7 and hose 8 of the machine (Note: water pressure must be less than 0.2Mpa).
- 4.9 The engine was idling during cleaning state. Turn on the warm air switch.
- 4.10 Cleaning time according to the cylinder No.( II )

Note: Pay attention to the temperature of engine through the car water temperature meter when the machine working. Stop the engine immediately with high temperature.

## **Coolant fluid exchanged**

- 4.11 After the circulation process finished, turn the valve 6 to exchange position.
- 4.12 Start the engine.
- 4.13 Start the machine after the water tank thermostat is turned on with the normal temp. and having used fluid through inlet liquid hose. New and used antifreeze fluid exchanged between the engine and the machine; (Note: water pressure must be less than 0.2Mpa).
- 4.14Compare with the new and used fluid's color through the window 2 and 5, the Exchange operation finished when the color of new and used fluid is closed in windows 2 and 5.
- 4.15 Turn off the engine and the machine.
- 4.16 Recover the original connection after the engine is cooling. Check the antifreeze fluid is enough, if not add to full.
- 4.17 Start the engine and confirm there's no leakage. Turn off the engine.
- 4.18 Drain used fluid from small water tank of vehicle and refilling new antifreeze Fluid.
- 4.19 Observe to the temp. of the vehicle during the engine running, stop engine immediately and troubleshooting if high temperature appear.
- 4.20 Discharge the used fluid from drain valve 9 in time.