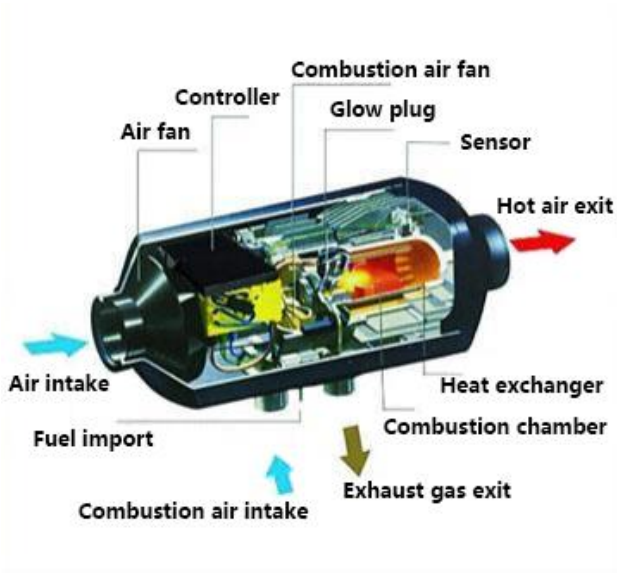
Operating instruction

JEABONG Diesel Air Heater





Installation instructions

Operation instructions

Maintenance instructions

Summary

The diesel air heater produced by our company is a kind of volatile atomization air heater, which is driven by 12V DC power supply, which is fully automatic program control. The product uses diesel fuel as fuel, blowing out hot gas, and the temperature is adjustable.

Main technical parameters and shapes

Fuel	Model number	Voltage	Size	Fuel consumption	Weight
diesel oil	1KW/8KW	12V	38*25*29	0.16-0.52	7.5KG

When using 12V DC power supply, a separate wire is provided. When using indoor 110V power supply, please use the matching power supply.

Precautions

Please read the instruction manual before installation and use.

This heater has the following features:

1. Equipped with a 110V power supply, it can use either 110V AC power or a 12V battery (battery output current ≥16A).
2. Features voice broadcast function.
3. Automatically starts and stops according to the set temperature.
4. Equipped with Bluetooth functionality, making operation via mobile phone more convenient; various heater parameters can be viewed on the phone.
5. The heater is equipped with a side exhaust pipe and an air intake filter, so it can be placed directly outside the tent and connected to the inside of the tent via a corrugated pipe, making it very convenient to use.
6. The built-in altitude chip can measure the approximate altitude (high precision is not required, and an error is acceptable). Based on the altitude, it automatically adjusts the heater fuel frequency and fan speed. This makes it easier for the heater to ignite successfully and for combustion to be complete, reducing black smoke and carbon buildup.

After reading and understanding it, it is best to connect a power source in an open area, check the switch instructions, download the mobile app on your phone, and familiarize yourself with the app's functions. Add diesel fuel, turn on the machine, and observe that the heater is working normally before actually installing it in the desired location.

Installation process：

1． The suitable position should be selected when the heater is installed so as to facilitate the maintenance in the future**.**

warning： The temperature of the exhaust pipe is very high, away from the oil and inflammable materials.

2． The heater is installed horizontally. After the position is selected, two holes shall be opened according to the position of the air intake and Exhaust gas exit for passing through the air intake pipe and stainless steel exhaust pipe.Aluminum-plastic tube is installed on intake port, fix with clamps. The other side plus air filter is fixed with Clamp. This heater is equipped with a stainless steel pipe for side exhaust gas discharge, which can be used or removed according to one's own usage situation. This device is convenient for mobile use, and another stainless steel pipe is inserted into the side exhaust stainless steel pipe and fixed with a clamp.If the exhaust pipe needs to extend downwards outside the car or outdoors, you can remove the stainless steel pipe on the side discharge and install another stainless steel pipe.The exhaust pipe must be

led out of the car, and it is tilted and fixed so that the condensate is discharged.Then install the muffler and secure it with clamps.

3．**The temperature of the exhaust pipe is very high, away from the oil and inflammable materials.** Combustion air intake and Stainless steel exhaust pipe of the exhaust port ban installing upwind. Do not use the intake pipe and stainless steel exhaust pipe incorrectly.The hot air outlet of the diesel heater is connected and fixed with a special corrugated pipe, and the outlet of the corrugated pipe is connected to the air vent and fixed with a clamp.

4．The circuit layout should be kept away from high temperatures, compression is prohibited, the plug connection should be firm, the power supply voltage should be kept normal, and it should be connected to the heater.Choose either 110V AC power or 12V DC power according to your needs.

5．Press the On/off switch, the LCD screen displays ON, and the machine starts to work. First, the air fan rotates, the Glow plug starts to warm up, and then the oil pump starts to make a clattering sound. This is when the oil pump starts to pump oil. After a while, diesel enters the machine, and after atomization ignition, the machine starts to ignite. Since there is air in the oil pipe at the beginning, the internal combustion may be abnormal, or E-10 failure may occur, restart the machine, Due to the diesel just entering the heater, there may be some air or too much diesel entering the heater, which may cause noise in the machine. After running for a period of time, it will return to normal. After the machine self checks and determines that it is working properly, it will operate in the mode displayed on the LCD switch. This is the start-up process of the heater, which is a fixed mode. After the machine runs normally, adjust the required mode. Please refer to the instructions for the LCD switch.

6．Shut down press On/off switch. (LCD flash “OFF”). the Air fan continue to roll at this moment, After the heat dissipation of the heater is completed,stop running, it will take some time to finish, this process cannot be forced to stop the power supply, causing damage to the machine.

7．The Air intake、Hot air exit、Exhaust gas exit、Combustion air intake are forbidden to clog.

8．Please note to add diesel before it drops below 10%.

Maintenance Instructions

1．In the unused season, if the conditions permit, it is recommended that the whole system should be removed and properly stored after cleaning, or the various tuyere should be packed with plastic to prevent debris from entering and causing blockage;

2．After a long period of idleness, before use, a thorough examination shall be conducted to check whether the ventilation ducts, combustion air lines and exhaust pipes are blocked, broken and loosened;

3．Check whether the oil pipe is old and loose, whether the filter is blocked and whether the fuel tank is aging;

4．Check whether the line is loose, corrosive or fractured;

5．Run for 10-20 minutes. If abnormal burning sounds or obvious smell of fuel can be detected for a long time, the heater must be turned off and the professional personnel should be treated.

Panel fault code description：

Fault code	Machine failure	Treatment method
E-01	Power supply undervoltage	Insufficient supply voltage Power supply voltage needs to be increased
E-02	Power supply overvoltage	Supply voltage too high The supply voltage needs to be reduced
E-03	glow plug	Check whether the piston is open circuit Or short circuit
E-04	Oil pump failure	Check the oil pump and harness Check for wire breakage and short circuit
E-05	The machine is overheating	Check the temperature sensor on the housing. Or if the fan speed is abnormal
E-06	Motor failure	Check magnet polarity, hall sensor position, or loose motor terminal Move
E-07	Disconnection fault	Check panel connection plug, blue Loose or broken harness connection
E-08	The flame went out	Check for air or oil in the oil circuit Blockage due to wax deposition, resulting in poor oil supply
E-09	Faulty sensor	Check if the sensor plug is loose Moved, or broken wire, short circuit
E-10	Ignition failed	Check whether the oil circuit is blocked, or the oil inlet is not smooth, the oil pump is stuck, and the secondary ignition fails due to the blockage of the volatile screen caused by the oil problem. It often burns

Note: if the above operation does not solve the problem, the controller needs to be replaced.

Blue LCD Bluetooth witch Instructions



1. Key Function

=> Press and hold to turn on/off the heater

OK => Short press to query the working status of the machine; Press continuously for a short time to open the corresponding function and press for a long time to enter the timing setting and parameter setting;

After entering the timing setting and parameter setting, short press to confirm and Long press to return to the main interface.

=> Short press to increase the working temperature or oil quantity; press and hold to open the remote control pairing function

=> Short press to lower the operating temperature or oil quantity; press and hold to open the manual oil pumping function

2. Function Introduction

2.1 Mahine Working Status Query Function

2.1.1 Briefly press the OK key once

2.1.2 Ambient temperature display > Shell temperature display > Set temperature or gear display > Power supply voltage display > Altitude display > Timed startup time or shutdown time display (Timed startup or shutdown time is not set and is not displayed)

2.2 Temperature Control Mode Switching Function

2.2.1 Press the OK key twice in a row.

2.2.2 In automatic temperature control mode, the switch displays AT, and the temperature is represented by digital ℃; In manual temperature control mode, the switch displays MT, and the L-digit represents the gear.

2.3 Voice Type Switching Function

2.3.1 Press the OK key three times in a row.

2.3.2 Switch the type of voice broadcast: a total of four countries of voice, cycle switch in

2.4 Temperature Unit Switching Function

2.4.1 Press the OK key four short times in a row

2.4.2 Degrees Celsius shows℃，Degrees Fahrenheit shows

2.5 Automatic Start-Stop Function

2.5.1 Press the OK key five short times in a row

2.5.2 Enable the automatic start-stop function to display AC-1; Turn off the automatic start-stop function to display AC-0.

2.5.3 The automatic start-stop function is that when the ambient temperature is 2 ℃ or more lower than the set temperature, the machine will start automatically; When the ambient temperature is 1 ℃ or more than 1 ℃ higher than the set temperature, the machine will automatically shut down.

2.6 Extreme Thermal Mode Function

2.6.1 Press OK six short times in a row

2.6.2 Turn on the extreme hot mode function to display HO-1; HO-0 is displayed when the extreme hot mode function is turned off

2.6.3 The function of the extreme heat mode is: after it is turned on, the machine will automatically increase the pump oil quantity and adjust the air-oil ratio, so that the machine can heat quickly in a short time.

2.7.1 Press the OK key seven times in a row

2.7.2 After opening, the operation switch has voice, and after closing, there is no voice prompt.

2.8 Remote Pairing Function

2.8.1 Remote control pairing method: long press the "up key" to open the remote control pairing function, the switch displays HF-1 or HF-2, the remote control signal can be selected through the up and down key, select the HF-2 signal, short press the"remote control power key" to start the machine, after the switch is successfully paired with the remote control, the switch automatically returns to the main interface.

2.9 Manual Oil Pumping Function

2.9.1 Long press the "Down" key to open the manual oil pumping function interface, and the switch will display "H oF "; short press the" Up "key to start the manual oil pumping, and the switch will display" H on ""; when the fuel reaches the oil inlet of the

machine, short press the "Down" key to stop the manual oil pumping, and the switch will display "H OF ", short press" OK "to return to the main interface.

Note: When the fuel reaches the oil inlet of the machine, it will stop. If too much fuel enters the machine, there will be black smoke when the machine is started.

2.10 Timing Settings

2.10.1 Press the "OK" key for a long time to enter the timing setting, the status bar on the switch displays the alarm clock icon, the interface displays "1 oF", "1" indicates that the timing startup time is set, "oF" indicates that the state is off, press the "Up" key for a short time to start the timing startup time setting, "1 on" is displayed, "on" indicates that the state is on. Short press the "OK" key to enter the setting

2.10.2 Timing is a countdown mode, the maximum time is set to 99 hours: 59 minutes, short press the "up key" or "down key" to select the value, short press the "OK key" to confirm the value

2.10.3 After the timing startup time is set, enter the timing shutdown time setting, display "2 oF", "2" indicates that the timing shutdown time is set, "oF" indicates the off state, short press the "Up" key to start the timing startup time setting,display "2 on", "on" indicates the on state, short press the "OK" key to enter the setting.

2.10.4 Press and hold the "OK" key to return to the main interface after the timing startup or timing shutdown setting is completed

3.Bluetooth App Guide

IOS

Android

Apple system: Use the iPhone browser to scan QR Code to download the Apple APP or open the APP Store to search for AirHeater to download

Android system: Use the Android mobile browser to scan QR Code to download Android apps or open Google play to search for Warm Drive to download

Connect for the first time: find the corresponding device on the APP, click "Confirm Connection", the connection icon will be displayed on the switch, and press OK to confirm the connection.

Bluetooth APP Usage Guide

1.Search Page

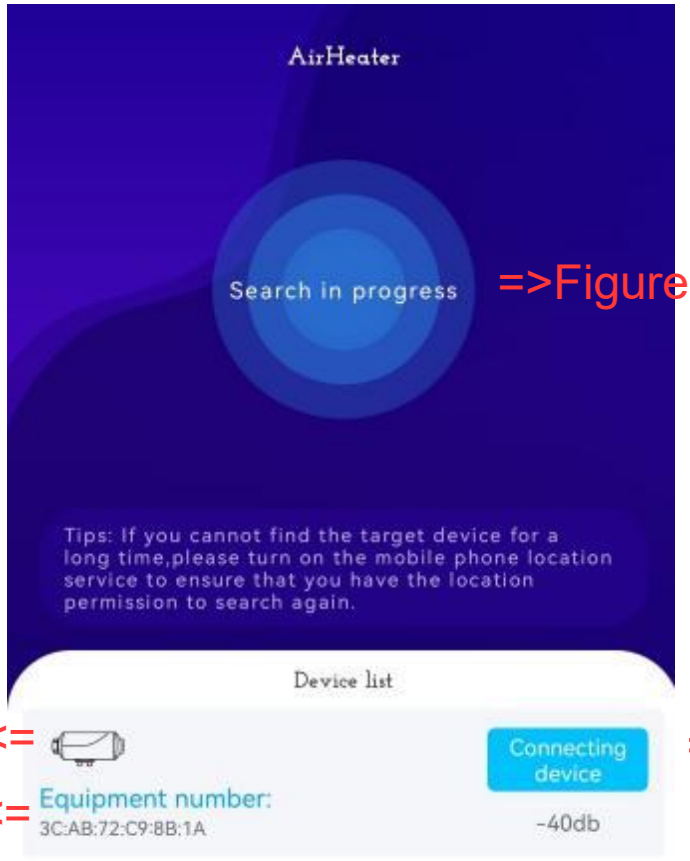


Figure 1<=

Figure 2<=

=>Figure 3

=>Figure 4

=>Figure 5

After the device is powered on, open the mobile phone APP to display the following interface.

1.1 Figure 1 The icon indicates that the connected device is a heater.

1.2 Figure 2 Icons represent the unique device number for each machine.

1.3 The icon in Figure 3 indicates the connection status of the machine. If you confirm the device you are currently using, click on the connected device to enter the main interface.

1.4 The icon in Figure 4 indicates the signal strength of the switch equipped with the machine. The lower the negative value, the higher the current switch signal strength is, and it also indicates that the current switch is closest to the user.

1.5 The icon in Figure 5 indicates that when the Bluetooth signal is unstable and the device cannot be searched, short press Figure 5 to refresh the signal.

2. Main interface

After the machine is successfully connected to the Bluetooth APP, the Bluetooth APP displays the following interface.

2.1 Figure 1 icon shows the ambient temperature around the switch

2.2 Figure 2 indicates the temperature control mode of the machine; AT is automatic temperature control <=> MT is manual temperature control

2.3 Figure 3 is unavailable

2.4 Figure 4 shows the power supply voltage data, altitude data, fan speed data, and machine housing temperature data from left to right.

2.5 Figure 5 shows the set temperature display and the set gear display. The set temperature range is adjusted in AT automatic temperature control mode, and the range of 1-10 is adjusted in MT manual temperature control mode.

2.6 Figure 6 shows the Auto Start/Stop function, which illuminates when enabled. The Auto Start/Stop function automatically turns on when the ambient temperature is 2 degrees Celsius or higher below the set temperature and automatically turns off when the ambient. The temperature is 1 degree Celsius or higher above the set temperature.

When the Auto Start/Stop function is active, if the machine is off, Figure 11 will display "Standby." The machine will automatically power on based on temperature fluctuations. To completely shut down the machine, briefly press the power button (Figure 8).Figure 11 will display "Power Off."

2.7 Figure 7 shows the time display of scheduled power on and off. If the scheduled power on and off is not set, the displayed week is the real-time week of the day. After setting the scheduled power on oroff, the time and week of the scheduled power on or off will be displayed.

2.8 Figure 8 shows the power button, which lights up when the device is turned on and turns off when the device is turned off.

2.9 Figure 9 is the down button, which is used to lower the set temperature or working gear.

2.10 Figure 10 shows the upward adjustment button, which is used to increase the set temperature or working gear.

2.11 Figure 11 shows the machine's working status.

Figure 1

Figure 2<=

=>Figure 3

Figure 4<=

Figure 5<=

=>Figure 6

Figure 7<=

Figure 8

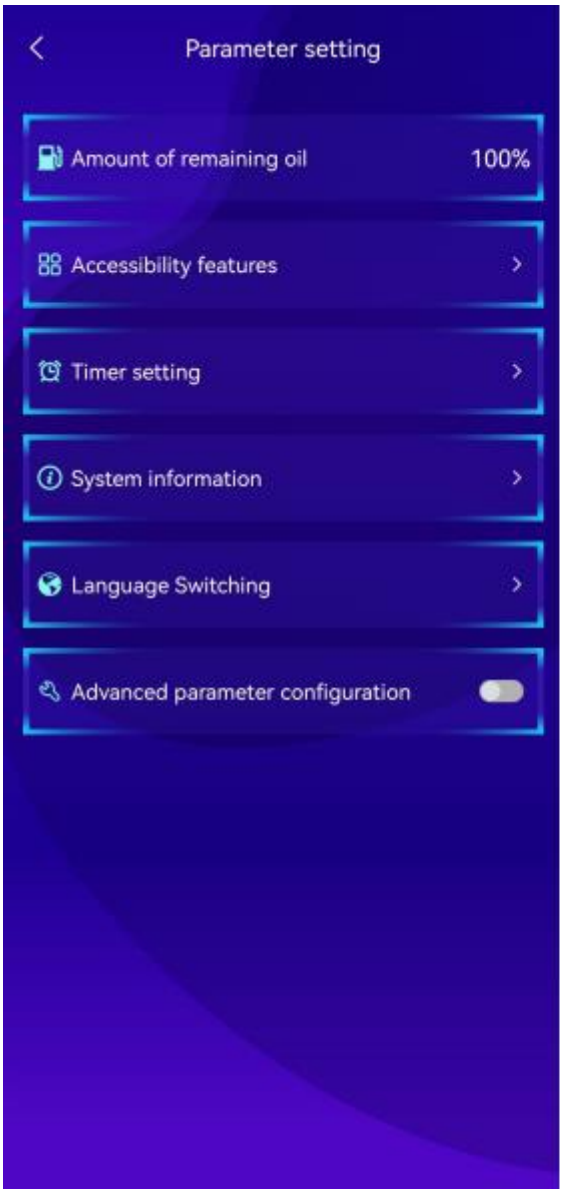
Figure 9<=

=>Figure 10



Figure 11

3.Parameter setting（Click the settings button in the upper right corner）:



=>Figure 1

Figure 2 <=
Figure 3 <=
Figure 4 <=
Figure 5 <=
Figure 6 <=
Figure 7 <=



2 3

3.1 Figure 1 (Amount of remaining oil) is unavailable.

3.2 Accessibility features:

Figure 2—shows the temperature unit display switch. To display Celsius, select ° C. To display Fahrenheit, select ° F;

Figure 3-- shows the height unit switching setting. It without this function, it cannot be switched.

Figure 4--This function (Fuel reset) is unavailable.

Figure 5--shows the voice prompt function. When it is turned on, there will be a voice prompt when the machine is turned on. There will be no voice prompt when it is turned off.

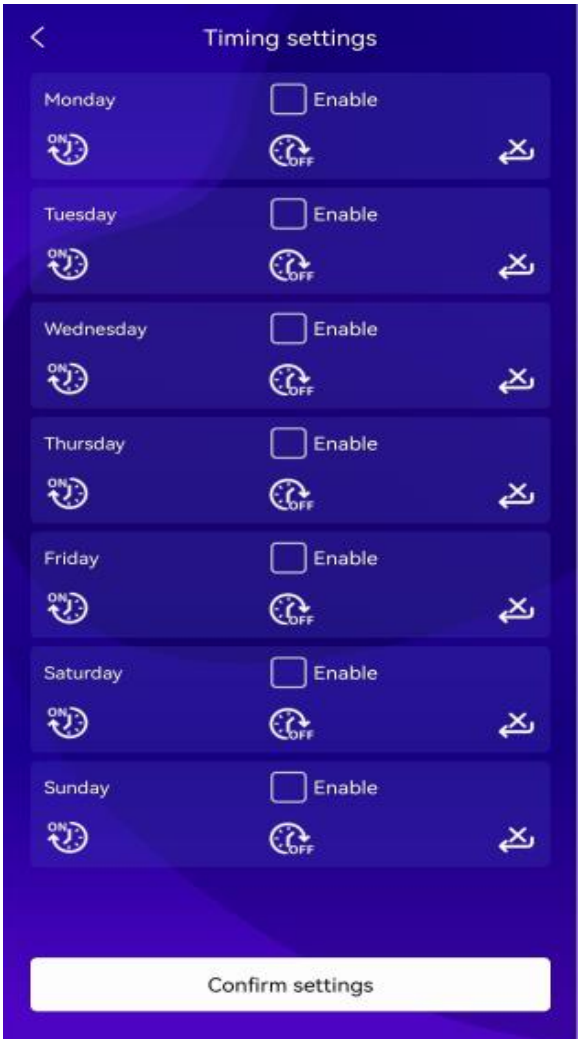
Figure 6-- This function (Cleaning Mode) is unavailable.

Figure 7-- shows the extreme heat mode. Once activated, the machine automatically adjusts the air-to-fuel ratio, achieving high combustion efficiency and temperatures in a short period of time.

4. Timer settings——This function is not available（Figure 4 below）

5. System information——This function is unavailable .（Figure 5 below）

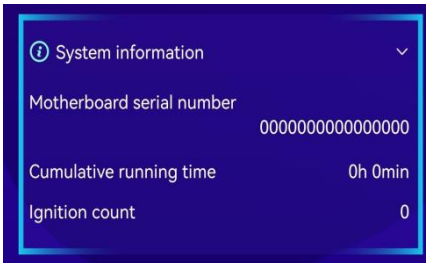
6. language switch— After turning on the language switch, 10 languages and their corresponding flags are displayed.Select the language you want to switch to, and you can switch the language displayed on the APP with one click.（Figure 6 below）



4



6



5

7.Advanced parameter settings（Figure 7 below）：

7.1 Enter the four-digit password "9009" to enter the advanced parameter configuration settings

7.2 Figure 1 shows the fuel type selection: This heater can only select diesel .

7.3 Figure 2 and Figure 3 are the lower and upper limits of the heating temperature. Toensure the safe operation of the machine,they are temporarily closed and cannot beset (This cannot be adjusted).

7.4 Figure 4 shows the minimum pump oil volume setting, which can be set within the range of 0.8-3.5HZ

7.5 Figure 5 shows the maximum pump oil volume setting, which can be set within the range of 2.5-9.0HZ

7.6 Figure 6 shows the minimum fan speed setting, which can be set from 1300-3200RPM.

7.7 Figure 7 shows the maximum fan speed setting, which can be set from 3200-5000RPM.

7.8 Figure 8 shows the ignition power setting, which can be set from 70W to 95W.

7.9 Figure 9 shows the fuel tank capacity selection, which can be set in the range of 5L-7L-9L-10L-15L-20L(No adjustment needed)

7.10 Figure 10 shows the oil pump flow selection, which can be set in the range of 16ML-22ML-28ML-32ML(This heater isselected as 22ML).

`



=>Figure 1

=>Figure 2

=>Figure 3

=>Figure 4

=>Figure 5

=>Figure 6

=>Figure 7

=>Figure 8

=>Figure 9

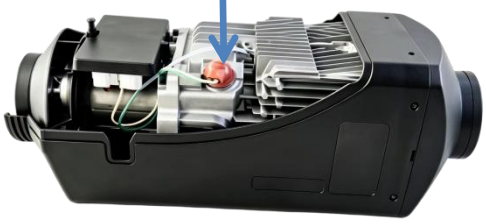
=>Figure 10

Maintenance diagram





Glow plug

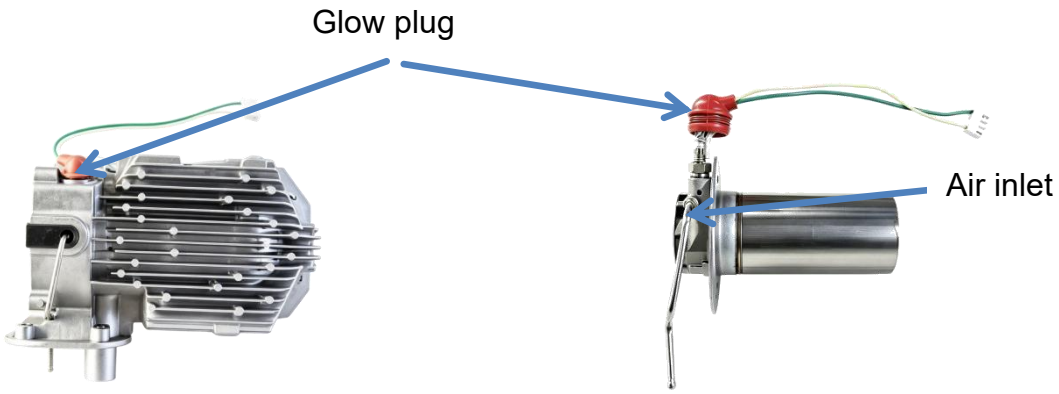


Diesel Heater

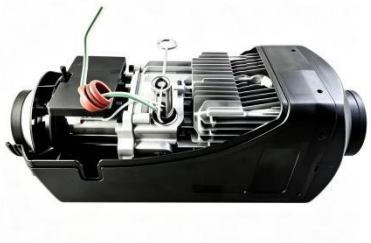


Tool

When installing the glow plug, pay attention to keeping the two wires of the glow plug apart and not touching each other, and then fasten the sealing cap



The air inlet must be kept unobstructed



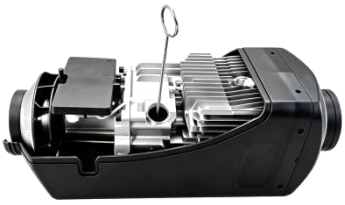
Remove the heating



Location of atomizing mesh



Remove the atomizing mesh



Install atomizing mesh



Make the air inlet unobstructed

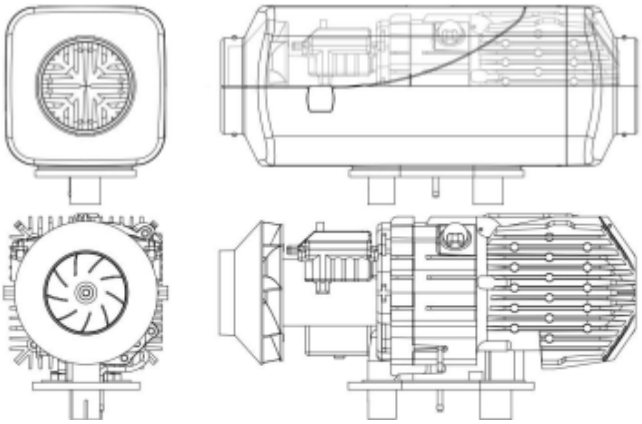


Make the air inlet unobstructed

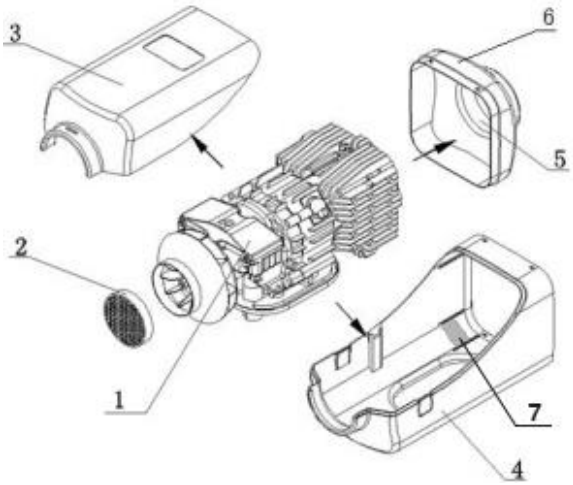
If E-08 appears after a period of use, please check if the fuel tank is short of diesel and if there is diesel in the fuel pipe. If E-10 appears after starting up and a large amount of white smoke is emitted from the exhaust pipe, and E-10 still appears after starting up again, please check if the combustion chamber inlet is blocked. If the air inlet is unobstructed, please clean or replace the atomizing mesh.

Host decomposition diagram

Structural Architecture 1



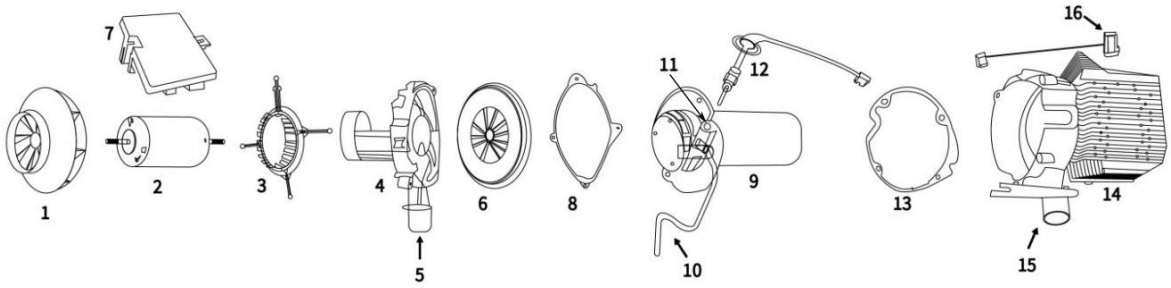
Structural Architecture 2



(1) Main engine
(2) Heating air intake grille
(3) Upper casing hood
(4) Lower casing hood
(5) Warm air vent
(6) Warm air vent hood
(7) High temperature resistant gasket (Four pieces)

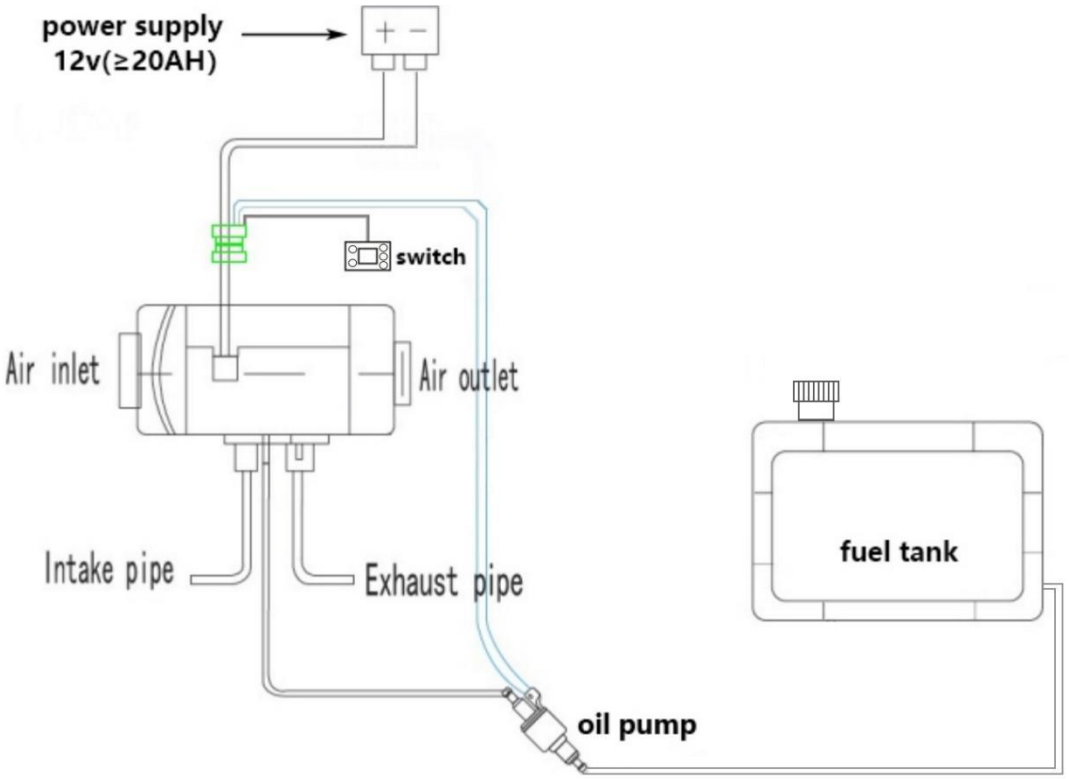
When disassembling or assembling the Main engine, pay attention to placing the high-temperature resistant gaskets at the four corners of the Main engine on the protruding parts of the four corners.

Structural Architecture 3



1 Heating fan **2** Fan motor **3** Bracket **4** Fan motor fixing bracket
5 Combustion air intake **6** Combustion fan **7** Controller **8**、**13** Gasket
9 Combustion chamber **10** Diesel fuel inlet pipe **11** Glow plug Mounting Hole **12** Glow plug
14 Aluminum body for heat dissipation **15** Exhaust vent **16** Temperature sensor

circuit diagram



Please let me know after receiving the goods, or if you encounter any problems during use, please contact me. Video files can be received here.

Email: 2241757241@qq.com

FCC Warnning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection againstharmful interference in a residential installation. This equipment generates, uses and can radiateradio frequency energy and, if not installed and used in accordance with the instructions, maycause harmful interference to radio communications. However, there is no guarantee thatinterference will not occur in a particular installation. If this equipment does cause harmfulinterference to radio or television reception, which can be determined by turning the equipmentoff and on, the user is encouraged to try to correct the interference by one or more of thefollowing measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.