



Upgrade · The Home Creator Way

DIESEL HEATER

MODEL: S590136 S1/ S590136 S2/ S590136 S3

VEVOR
Support Center



S590136 S1



S590136 S2



S590136 S3

MODEL: S590136 S1/S590136 S2/S590136 S3



This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

The product complies with relevant standards and regulations. Installation of this device must comply with all applicable regulations, and it should only be operated in well-ventilated areas. Please read the user manual before installing and using this equipment.

Please properly keep product. Check whether the product is abnormal before use. If it is abnormal, please stop using it.

Please use the product according to the intended use, warn of potential injury from misuse.

Symbol	Symbol Description
	Warning: To reduce the risk of injury, the user must read the instructions manual carefully.
	This symbol, placed before a safety comment, indicates a kind of precaution, warning, or danger. Ignoring this warning may lead to an accident. To reduce the risk of injury, fire, or electrocution, please always follow the recommendations shown below.
	CORRECT DISPOSAL: This product is subject to the provision of European Directive 2012/ 19/EC. The symbol showing a wheeled bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices.
	Warning: Toxic material. Take care to avoid coming into contact with toxic material.
	Warning: Flammable material. Take care to avoid causing a fire by igniting flammable material.



Responsibility requirements:

·Vevor is not responsible for any issues arising from non-compliance with these instructions and the precautions included in these instructions. Similarly, the company shall not be held responsible for any issues arising from repairs conducted without professional maintenance or the use of original spare parts/accessories. This type of maintenance will result in the invalidation of the heater's type approval and its ECE type approval certificate.

SAFETY INSTRUCTION



WARNING:



Read all safety warnings, instructions, illustrations, and specifications provided with this diesel heater. Failure to follow all instructions listed below may result in electric shock, fire, and /or serious injury.

1. The following measures shall not be adopted

- Change the important component of the diesel heater.
- Make use of spare parts from other manufacturers without permission.
- Disobey the instruction and guide during installation or operation.

2. Only allow using original attachments and spare parts during installation and maintenance.

3. The heaters shall not be used in places where they may form flammable vapor or dust, for example:

- Fuel depot
- Carbon storehouse
- Timber storehouse
- Granary and similar sites
- Diesel/petrol station

And keep away from fuel tanks, compression tanks, fire extinguishers, clothes, or other flammable objects.

4. Do not use cigarette lighter for startup.

5. Do not use the heater in closed and/or unventilated places.

6. The heaters shall be turned off when filling fuel.

7. Do not cut off the electric power during operation.

8. If the fuel leaks or discharges from the fuel system of heaters, please contact VEVOR for repair.

9. Place the exhaust outlet outside to prevent any penetration of exhaust fumes.

10. In the process of work, it is forbidden to cut off the electric power directly to stop the heater from working.

11. Seal all gaps between the mounting plate and the car body.

12. The machine will stop heating after over-temperature protection. Please do not power off. After the machine is naturally cooled and turned off, it can be restarted.

13. After turning off the machine, please do not immediately disconnect the power supply. It takes 3-5 minutes for the machine to stop working completely.

14. After starting the machine for 3-5 minutes, it will work normally and heat up. Please wait patiently.

15. When the heater is just started, the current is relatively high, so an adapter with a voltage of 12V and a current of 15A or greater is required for the power supply.

16. This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be done by children without supervision.

17. **WARNING: Flammable material**



During installation/use, service, and disposal of the appliance, please pay attention that there should be no flammable substances around the exhaust pipe. The temperature of the exhaust pipe is very high when it is working. Take care to avoid causing a fire by igniting flammable material.

Please strictly follow the following methods to correctly install insulation sleeves on the exhaust pipe and reduce surface temperature:



18. **WARNING: Toxic material**



During installation/use, service, and disposal of the appliance, please install the appliance with space for ventilation to prevent carbon monoxide poisoning. Place the exhaust outlet outdoors to prevent exhaust gas from seeping in.

19. The fuel tank supplying fuel to the device shall meet the following requirements:

- a) If there is a leak, the fuel should be discharged to the ground and must not come into contact with the hot parts of the vehicle or load
- b) The fuel tank containing gasoline should be equipped with an effective flame arrester at the fuel filling port, or a sealing device should be used to completely seal the opening

20.Space that cannot be used for heating and transporting dangerous goods.

21.Please use the product according to the intended use, warn of potential injury from misuse.

22.The product complies with relevant standards and regulations. Installation of this device must comply with all applicable regulations, and it should only be operated in well-ventilated areas. Please read the user manual before installing and using this equipment.

23.WARNING: Use only the original supply.

Maintenance:If black smoke is found during the operation of the heater for a period of time or in the second year of use, it indicates that there is carbon accumulation in the combustion chamber that needs to be cleaned in a timely manner. Note: If any of the above situations occur, please replace the Air Filter and Fuel Filter.

FCC INFORMATION

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment!

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

- 1) This product may cause harmful interference.
- 2)This product must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications to this product are not expressly approved by the party. Responsibility for compliance could void the user's authority to operate the product.

Note: This product 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 against harmful interference in a residential installation.

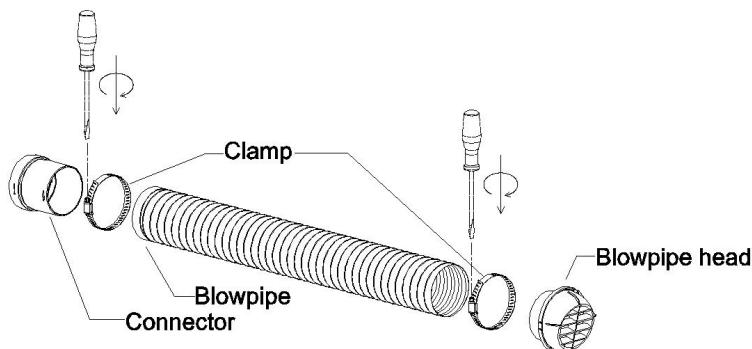
This product generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful

interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

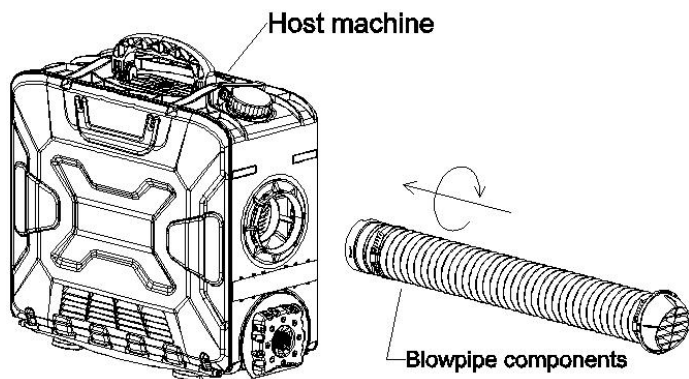
- Reorient or relocate the receiving antenna.
- Increase the distance between the product and the receiver.
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

INSTRUCTION STEPS

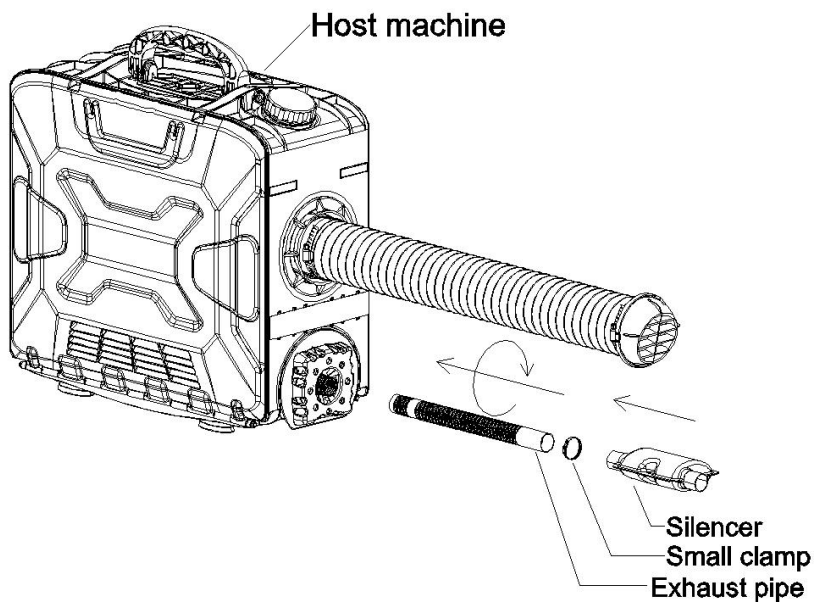
STEP1: Assemble the Blowpipe as shown in the drawing below.



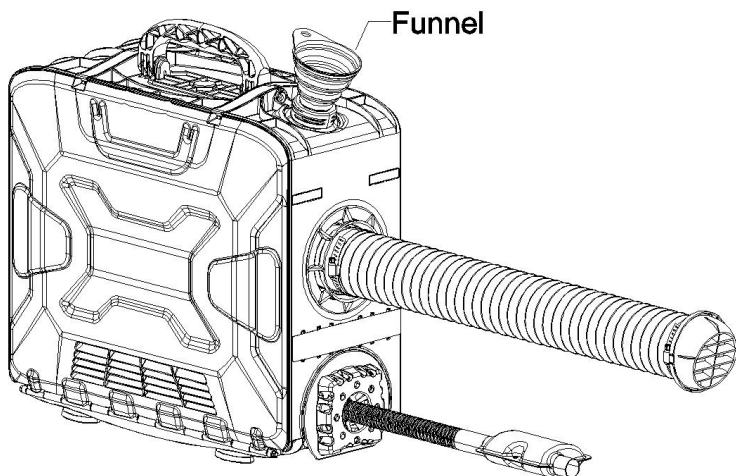
STEP2: Screw the Blowpipe into the Host machine.



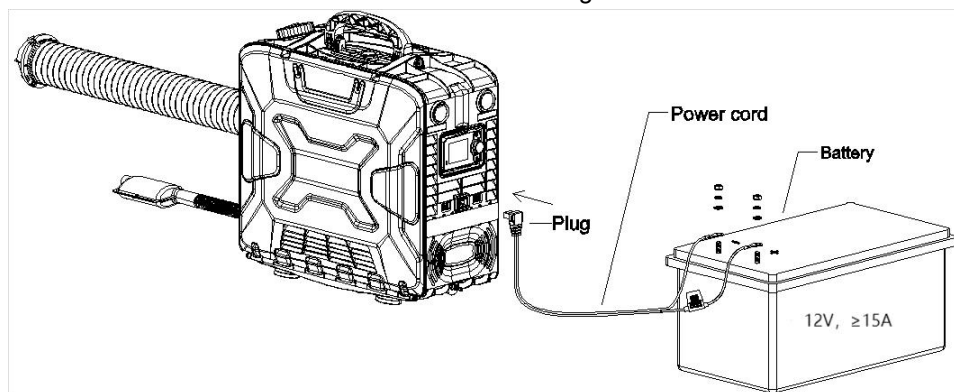
STEP3: Screw the Exhaust pipe into the Host machine, then put the Silencer into the Exhaust pipe and lock it with a Small clamp.



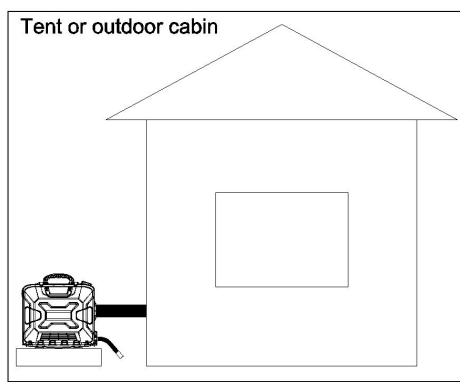
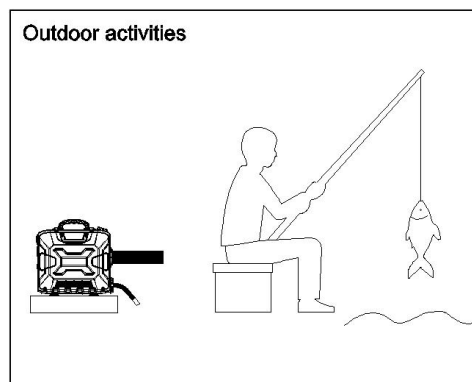
STEP4: Use a Funnel to add diesel to the fuel tank and close the lid.



STEP5: Connect the Power cord and insert the Plug into the Host machine.



INSTALLATION POSITION



The installation of the machine requires professional personnel.



It is recommended to use high-grade diesel fuel when refueling the diesel heater. Other types of fuels, such as kerosene, vegetable oil, gasoline, waste oil, etc., cannot be used. Otherwise, the heater may have an unpleasant odor and malfunction during operation.

MODEL

Product Model	S590136 S1/S590136 S2/S590136 S3
Appearance	
Heating medium	Air
Fuel	Diesel
Ratings	DC12V/40W
Adapter	100-240V~, 50-60Hz, 12V/15A

PACKING LIST

Model	Pictures	Qty.
Host machine		1
Liquid crystal switch		1
Exhaust pipe		1
Protective sleeve		1
Blowpipe		1
Blowpipe head		1

Blowpipe connector		1
Remote control		1
Silencer		1
Blowpipe clamp		2
Small blowpipe clamp		1
Gloves		1
Power cord		1
Funnel		1
User Manual		1
Muffler Accessories		1

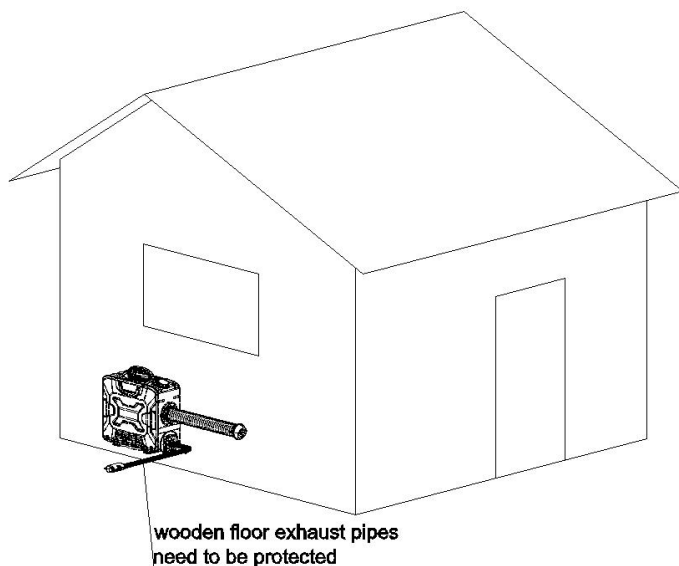
Notes when installing or using

Refer to the installation diagram below and carefully read the precautions when installing or using:

1. Precautions for the installation:

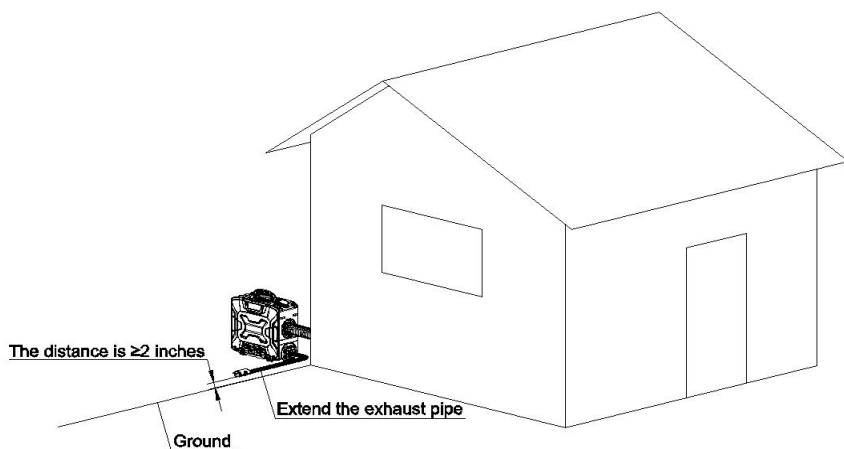
※ If installing the heater inside a building:

① With the heater placed indoors: Make holes in the wall for the exhaust pipe to be placed outdoors. Pay attention to insulating the exhaust pipe as it can become very hot and could cause a fire.



Indoor installation

② With the heater placed outdoors: It's necessary to extend the exhaust pipe to avoid the exhaust from being sucked into the building from the back fan position of the heater, which can lead to carbon monoxide poisoning.

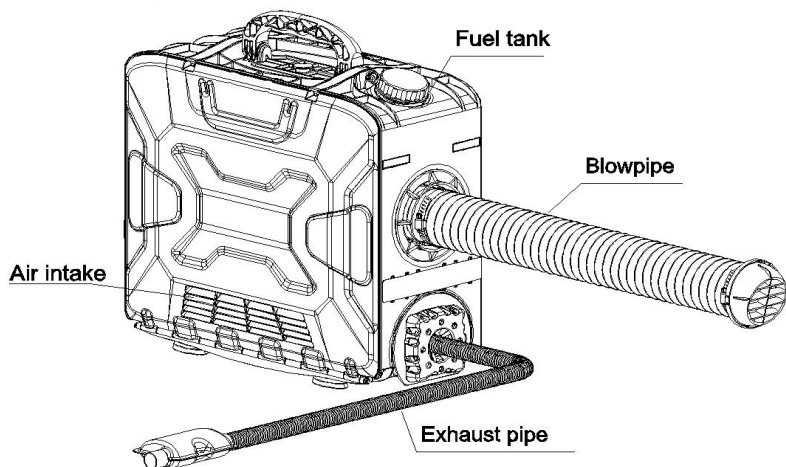


Outdoor installation

※ Installation position and precautions

- ① Reserve a 4-inch gap between the air inlet for unobstructed air intake
- ② Keep the bottom exhaust pipe at a distance of 2 inches from the ground, and prevent fires if the exhaust pipe temperature is high;

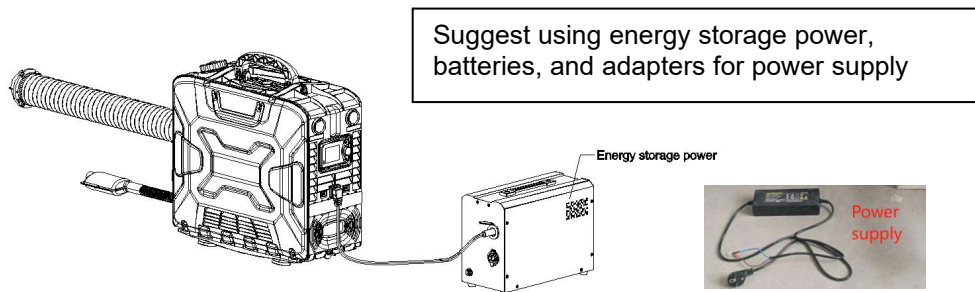
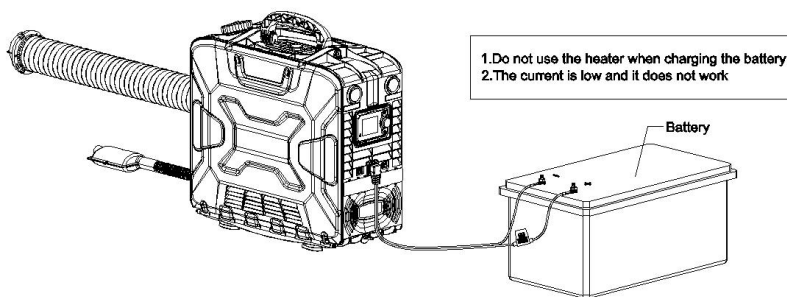
- ③ Do not bend the exhaust pipe excessively, as it may cause uneven exhaust flow;
- ④ The air outlet duct is not easily too long and multiple bends can cause heat to be unable to be discharged, resulting in a high temperature fault;
- ⑤ When refueling the fuel tank, do not flow onto the casing, as it will flow along the inside of the machine to the exhaust pipe position, causing smoke. Fill the oil level close to the fuel tank port;
- ⑥ Do not block the intake pipe, which will cause insufficient oxygen and the heater will not work;



Installation location precautions - schematic diagram

2. Precautions for the power supply:

※ The power supply for the diesel heater must meet the following requirements:
Voltage: 12V; Current: $\geq 15A$, either from a direct power source or a battery. When powered by a battery, do not charge the battery while using the heater as insufficient current can cause malfunction. Ensure a firm and secure connection to the battery. Using clamps for fixation can result in poor contact.



※When extending the power cable for the diesel heater, the wire diameter should be $>2\text{mm}^2$. Using a thin wire can lead to insufficient current, causing the heater not to work. After connecting, use insulating tape to protect the connection and prevent electrical leakage, which might lead to fires.



※Do not disconnect the power when the diesel heater is operating at high temperatures. This can cause backfire due to high temperatures. Repeatedly doing so can cause permanent damage. Solutions:

- If power is cut and you immediately turn on the heater: Wait until the internal heat of the heater has completely dissipated before turning it on for normal operation.

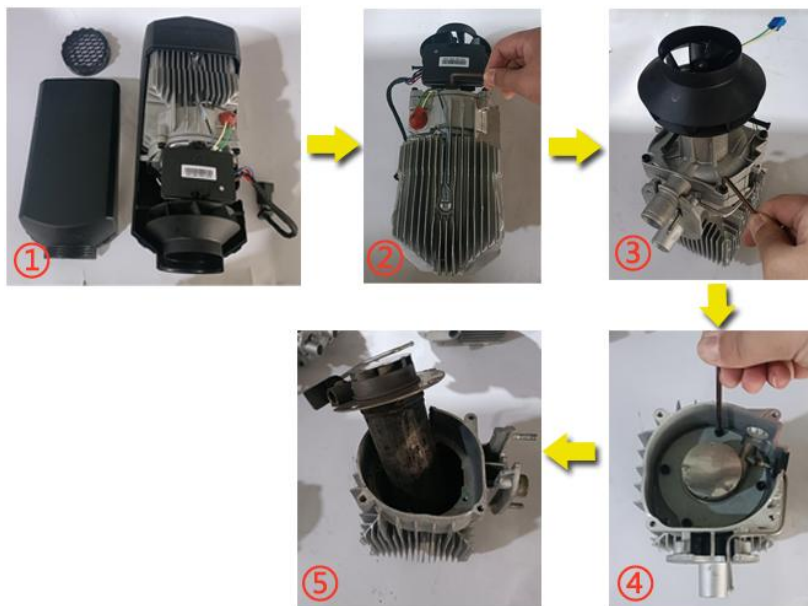
- If the heater is turned on a long time after a power cut: Incomplete combustion inside may produce a large amount of smoke. Wait for the smoke to clear, and the heater will automatically start and operate normally.

※ Oil circuit fault, such as E4/E8/E10 fault code, indicates that there is no oil heater or heat in the machine. The following steps need to be followed for troubleshooting:

- ① **Is there a shortage of oil in the fuel tank;**
- ② **Whether the oil filter is blocked;**
- ③ **Is there any bending of the oil pipe that cannot accommodate oil;**
- ④ **Is the oil pump not working;**

※ Maintenance: If black smoke is found during the operation of the heater for a period of time or the second year of use, it indicates that there is carbon accumulation in the combustion chamber that needs to be cleaned in a timely manner. The operation method is as follows:

- ① **Remove the outer shell;**
- ② **Remove the motherboard bolts with an Allen wrench;**
- ③ **Remove the four bolts of the fan assembly with an Allen wrench;**
- ④ **Remove the four bolts of the combustion chamber with an Allen wrench;**
- ⑤ **Remove the combustion chamber and replace it with a new recovery heater;**



Schematic diagram of combustion chamber replacement

Cautions for Diesel Heater Power Supply:

※ Diesel heater power supply requirements: Voltage: 12V; Current: $\geq 20A$;
 Use either a power source or a battery. (Avoid charging the battery while supplying power to the heater, as low current may lead to malfunctions. Ensure a secure battery connection without using clamps to prevent poor contact. Using the car's cigarette lighter as a power source is not recommended due to insufficient current.)



Fixing the battery clamp can easily cause poor contact



Cigarette lighter current low does not work

PRODUCT INFORMATION

Model: S590136 S1/S590136 S2/S590136 S3





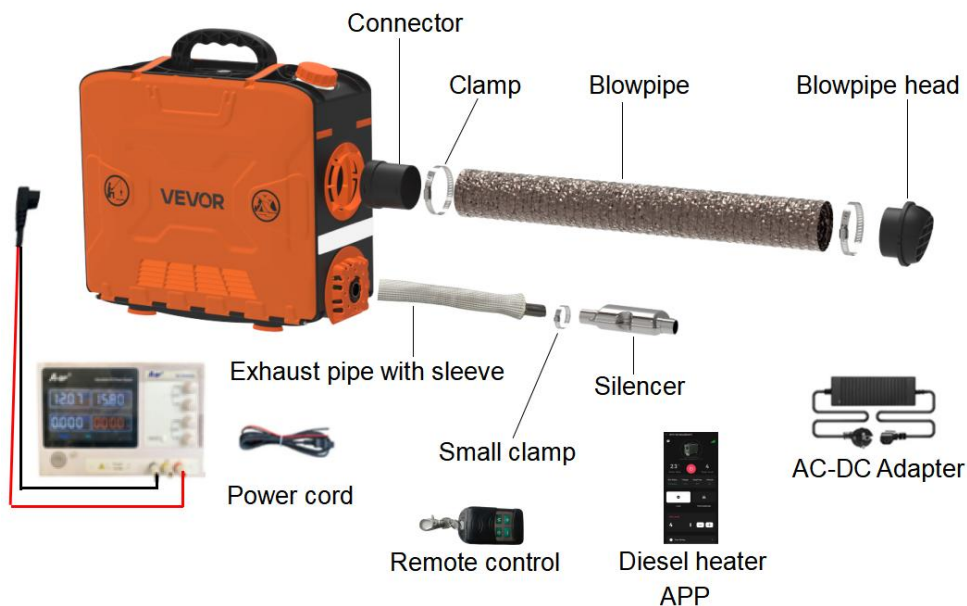
1	Fuel tank lid	2	Fuel tank
3	Compass	4	High beam lamp
5	Liquid crystal shutter	6	Power supply port
7	Low beam lamp	8	Outlet
9	Exhaust port	10	Air inlet
11	On/Off switch for High beam lamp	12	On/Off switch for Low beam lamp

INSTALLATION DIAGRAM



When the heater is just started, the current is relatively high, so an adapter with a voltage of 12V and a current of 15A or greater is required for the power supply.

Diesel heater installation drawing Model:
S590136 S1/S590136 S2/S590136 S3

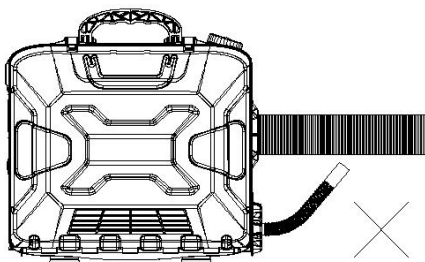
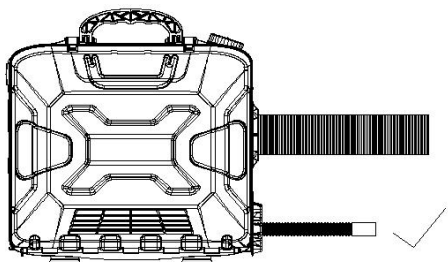


**For specific installation,
please scan the QR code
to view the installation
video**



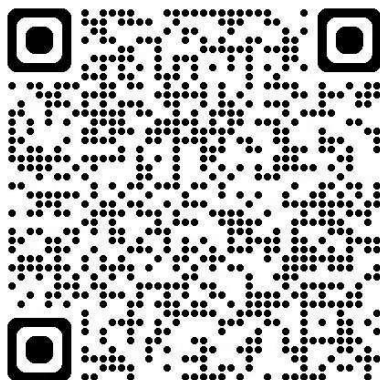
Warning:

1. The air inlet shall not be blocked, and keep the inlet open and clear.
2. Keep the exhaust pipe clear. The exhaust pipe outlet shall be kept away from anything flammable, and avoid heating and igniting the flammable goods and loading cargo on the ground.
3. To ensure optimal combustion, please remember that the smoke exhaust pipe cannot be placed upward, but must be placed horizontally or downward.



Panel operation instructions

Please refer to the instructions below for the LCD screen switch usage. To sync, scan the QR code on the right to watch the video.



Function	Parameter	Operation method	Specific operational steps
Power on	/	Connect the power cord, then short press the [Power] button.	1. Connect the power cord. In the power-off state, short press the [Power] button to start the machine, the screen displays the temperature and dynamic running state, and starts heating.
Power off	/	Short press the [Power] button.	In the power-on state, short press the [Power] button to

			display "OFF" to shut down the machine. During the shutdown process, the button cannot be operated, and the machine will be completely shut down after the fan stops working. Note: It is forbidden to forcefully cut off the power during the shutdown process, otherwise the internal heat will not be completely dissipated. A second startup will produce a large amount of smoke, and incomplete heat dissipation can easily damage the internal wind turbine of the machine. At this time, it is necessary to wait for the internal to completely burn before returning to normal.
Mode switching	/	Short press the [Knob].	Short press the [Knob] to switch to the current gear: temperature control mode or gear mode.
Gear adjustment	Gear 1 to 10	Rotate the [Knob].	Turn the knob clockwise to increase the operating position/temperature by 1, up to 10 positions /36℃. Turn the knob counterclockwise to increase the operating position/temperature by 1, down to 1 position /8℃
Basic setup	/	After turning on the machine, long press the [Settings] for 3 seconds to enter the basic Settings	F0: Current time. F1: Self-start time. F2: Running time [after self-start]. F3: Self-start switch setting. F4: Language switching [Chinese (C), English (E), Russian (R), -

		interface. Press the [Knob] to make modifications, and press the [knob] again to confirm the current data modification. Rotate the [knob] to adjust the Settings. After all adjustments are successful, hold down [Settings] for 3 seconds to save all basic Settings.	(Silent)]. F5: Temperature compensation. F6: Fuel tank volume [5-50L(Switch unit: 5L)(Default: 5L)] [Display - indicates that the fuel tank condition is not monitored]. F7: Oil pump Type [16/22/28/32UL(default is 22UL)]. F8: Constant temperature heating (In the temperature control mode, when the cab temperature reaches the set temperature, it will automatically shut down after a delay of 30 seconds;) When the temperature in the cab is 2°C lower than the set temperature, the machine will automatically start after a delay of 30 seconds. F9: Temperature Switching (°F/°C). FA: KM/ Kft switch; Fb: Screen brightness (0-100) FC: Bluetooth Mesh Network Settings (YAH-A2422). For specific functions, please refer to the detailed description.
Engineering mode	/	When the device is turned on, hold down both "Settings" and "Power" for 3 seconds simultaneously, and then rotate the "knob" to	En00: Heater main Board version number [Scrolling Display]. En01: Fault code. En02: Shell temperature. En03: Power Supply voltage. En04: Heater operation position. En05: Cab temperature. En06: Altitude. En08: Remote control matching. En11: Factory data reset

		view the adjustment items.	
Remote control matching	/	In the engineering mode, enter the En08 interface and hold down the [knob] for 3 seconds to start matching.	When the screen shows "P-1", press the [plus] key on the remote control. When the screen shows "P-2", it indicates that the [Plus] key matches successfully. Then press the [minus] key. When the screen shows "P-3", press the [M] key. When the screen shows "P-4", press the [⏻] key. At this point, the matching is completed and the project mode will be automatically exited to return to the running interface. *To clear the last remote control matching data: Press [Power] for 7 seconds during the power-on self-check. When the interface shows "CLr", the clearing begins. When the interface shows "SUC", the clearing is successful.
Remote control function	/	Short press button.	The specific screen display and definition of the remote control keys are as follows: [+] Key: Adjust the plus button, and the corresponding screen display is "P-1". [-] Key: Adjust the minus button, and the corresponding screen display is "P-2". [M] Key: Mode switching button, corresponding to "P-3" displayed on the screen. [⏻] Key: Power on/off button,

			corresponding to the screen display "P-4".
Manual oil pump	/	When the power is connected for the first time and the device is turned off, long press the [Pump Oil] key at the lower left corner.	When the screen flashes and shows' -p - ', it returns to the initial interface and starts pumping oil. When the countdown ends, it will automatically exit or press the [Power] key to end the oil pumping and shut down the machine.
Fill the fuel tank	/		After turning on the machine, press and hold the [Pump Oil] key for 7 seconds to fill the fuel tank display icon on the interface.

BLUETOOTH OPERATION

- For iPhones: Search for and download the corresponding APP name "booyood" in the IOS APP Store or scan the QR code to download the corresponding APP, and then follow the steps below to connect and control the heater with your phone.
- Android phone: Scan the QR code with a browser to download the corresponding APP, and then follow the steps below to connect and control the heater with your phone.



IOS App
APP Store search "booyood"



Android APP

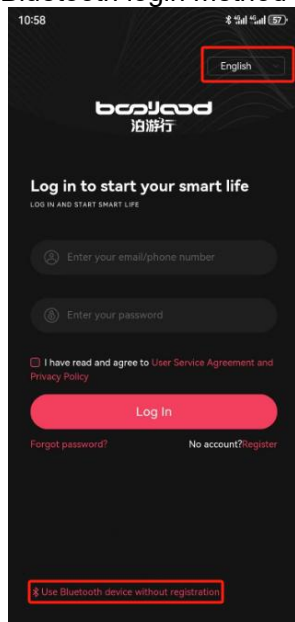


Scan the QR-Code with your browser to download the Airheater app from GooglePlay or Search the “booyood” in the GooglePlay app to install the Airheater app.

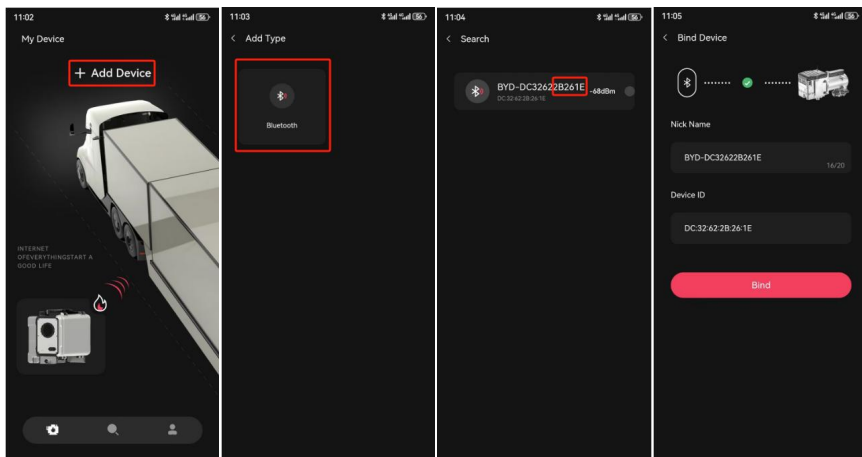
1. **Query the Bluetooth name:** After turning on the machine, press the [Settings] and [Knob] for 3 seconds simultaneously. The screen will display 'bLE', and a 6-character name (0-F) will be shown on the upper side of the screen.



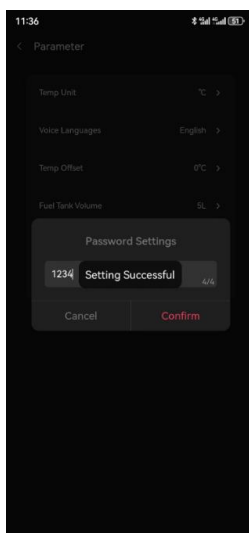
2. **Log in to the APP:** On the login interface, select the language in the upper right corner and the Bluetooth login method in the lower left corner.



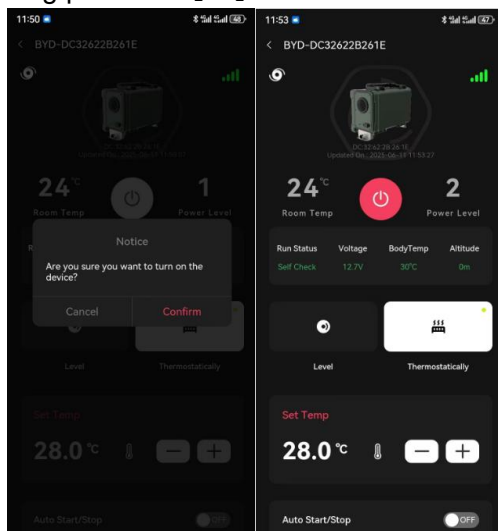
3. Connect to the mobile phone via Bluetooth: Click "+Add Device", then click the Bluetooth icon, find the corresponding local Bluetooth number: BYD+ MAC address of the Bluetooth device + the 4-digit number on the controller (refer to the figure below), and click the Bluetooth number to connect.



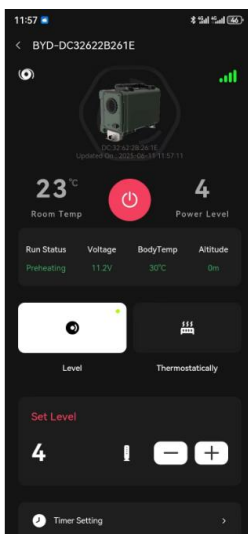
3. Click the  button to go to the settings screen, you can set the password and click "Confirm" to save the settings. If the password is modified, the switch needs to modify the password according to the above Bluetooth matching operation method.



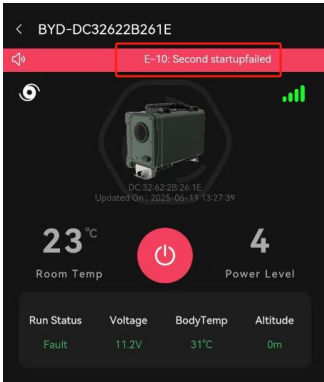
4. Tap to select or long press the  to turn on/turn off the heater.



5. Click "Level" or "Thermostatically" button to switch the gear mode or temperature control mode, then Click "up +" / "down -" button to increase + or decrease- the level (level 1-10)/temperature(8°C~36°C).



6. Fault display: When the heater fails, it will display the fault code E-xx, see the table mentioned earlier for the type of fault.



Fault table

Fault alarm

Show the following figure,corresponding to the failure symbol flicker,and corresponding to the failure device icon flicker,display data as fault code,its meaning please refer to the fault table.
*Spark plug,oil pump, fan, sensor, power supply and other symbols, flicker indicates that the corresponding device failure.

Fault table

Scan the QR code to view the troubleshooting method

Fault code	Cause of failure	solutions
E-01	Voltage anomaly	1. Check whether the type of power supply voltage for the heater is consistent with the actual vehicle voltage; 2. Check whether the power supply voltage is higher than 18V or lower than 9V. 3. Check whether there is any loose or loose connection at the main line bundle joint and the positive and negative terminals of the power supply.
E-03	Ignition plug failure	1. Check whether the ignition plug is loosely connected. 2. The ignition plug is faulty. Replace the ignition plug.
E-04	Abnormality of the oil pump	1. Check whether the plug of the oil pump is loose or loosely connected. 2. Check whether there is any open circuit in the main line bundle; The oil pump is faulty. Replace the oil pump.
E-05	High-temperature protection	When the temperature exceeds the high-temperature protection point, check whether the distance between the two ends of the air inlet and outlet of the heater and the obstacles is greater than 10 centimeters.
E-06	The intake air temperature sensor is faulty	1. Check whether the fan impeller is stuck. 2. Check whether the plug of the fan is loose or loosely connected. 3. After starting up, the fan speed is abnormal. Check whether the wind wheel

		induction magnet is missing or has incorrect polarity. Check whether the wind speed sensor on the mainboard is normal.
E-08	Start-up failure (ignition failure once)	1. Check whether the oil pump is working. 2. Check whether each connection point of the oil circuit and the atomization net are waxed or blocked. Check whether the air inlet of the heater is blocked.
E-09	The furnace temperature sensor is abnormal	1. Check whether the connection of the furnace temperature sensor is loose or loose. The model of the furnace temperature sensor is incorrect or faulty. Replace the sensor.
E-10	Start-up failure (secondary ignition failure)	1. Check whether the oil pump is working. 2. Check whether each connection point of the oil circuit and the atomization net are waxed or blocked. Check whether the air inlet of the heater is blocked.
Installation Guide	The surface temperature of the exhaust pipe is around 752 °F, and attention should be paid to protection against flammable materials during installation	1. Please note that there are no flammable substances around the exhaust pipe and muffler hot air outlet, and insulation materials should be used for protection. It is forbidden to drill holes and install machines on wooden floors. The surface temperature of the exhaust pipe is around 752 °F. 2. Prohibit the use of non high

		temperature resistant adhesives to avoid odor poisoning, and be careful to avoid causing fires by igniting flammable materials. 3. Installation position: ① Reserve a 4-inch gap at the air inlet for smooth air intake; ② Keep the bottom exhaust pipe at a distance of 2 inches from the ground, and prevent fires when the exhaust pipe temperature is high Do not bend the exhaust pipe excessively, as it may cause poor exhaust flow; ④ The exhaust duct is not easily too long and multiple bends can cause heat to be unable to be discharged, resulting in a high temperature fault When refueling the fuel tank, do not let it flow onto the outer shell, as it will flow along the inside of the machine to the exhaust pipe position, causing smoke. Fill the fuel tank to a level close to the fuel tank opening Do not block the intake pipe as it may cause insufficient oxygen and the heater to malfunction.
Accessories modification	Prohibit the use of non high temperature resistant materials and rubber seals that may cause odor and poisoning hazards	1. Extension of exhaust duct modification: It is recommended to purchase pipes made of the same material or high-temperature resistant material, with a length controlled within 2 meters and no large angle bending to avoid overheating. 2. Exhaust pipe modification and extension: It is recommended to purchase pipes made of the same

		material or high temperature resistant stainless steel material, with a length controlled within 2 meters and no large angle bending. The pipes must be discharged downwards to the outside and cannot be bent upwards multiple times to affect exhaust heat dissipation (the working temperature of the exhaust pipe reaches around 752 °F , and the installation position is prohibited from drilling holes in the wooden floor. Non high temperature resistant rubber seals are also prohibited, which may cause odor and poisoning hazards).
Emitting white smoke	Abnormal power outage/excessive manual pump oil volume	1. Manually pump oil, if there is too much oil inside the machine, it will not ignite and emit white smoke. The correct way is to pump oil to the inlet position and stop. If the pump oil volume is too high, the oil pipe should be unplugged and restarted 2-3 times to restore normal operation before inserting the oil pipe; Or use a hair dryer to blow towards the intake pipe for a period of time until it works properly. 2. Abnormal power outage during operation: During normal operation, press the 'power on/off button' to display 'OFF' for shutdown. During the shutdown process, the button cannot be operated. Wait for the fan to stop working before completely shutting down, and then disconnect the power supply. During the shutdown process, it is forbidden to forcefully cut off the power, otherwise the internal heat will not be completely

		dissipated and a large amount of smoke will be generated during the second startup. At this time, it is necessary to wait for the internal to completely burn before returning to normal. 3. Refer to E-01 fault code troubleshooting.
Smoking	Insufficient oxygen intake or carbon deposition in the combustion chamber	1. Does the altitude exceed the calibration parameters? Insufficient oxygen intake can cause ignition failure and black smoke emission. 2. Check if there is any blockage in the intake pipe causing insufficient oxygen intake. 3. The small space at the air inlet position leads to air intake obstruction. 4. Refer to the E-01 fault code check, the low point of the power supply voltage/current has insufficient heat from the ignition plug, resulting in ignition failure and black smoke emission. 5. Disassemble the internal combustion chamber of the machine to check for carbon deposits and replace the combustion chamber in a timely manner.
Smoke blue	Poor oil quality	Only high-grade diesel can be used, and the use of mixed diesel, other types of oil, and non brand new oil products is prohibited. In winter, negative temperature diesel should be met;
Machine oil leakage	Oil tank/pipe damage, side installation (Side installation	1. Check the appearance of the fuel tank/oil pipe and whether the fuel tank nozzle is damaged or cracked, which may cause oil leakage.

	prohibited)	2. When filling the fuel tank with diesel, be careful not to pour it onto the machine casing, otherwise it will flow into the interior and smoke due to high internal heat during operation. 3. The heater cannot be installed on the side. The oxygen hole oil on the ignition plug side will flow out through the hole, and the correct installation method is to have the intake/exhaust port facing downwards; 4. Poor oil quality leads to blockage of the ignition plug atomization network in the combustion chamber, causing ignition to flow out through the exhaust pipe. The ignition plug atomization network and high-grade diesel should be replaced.
There is no oil or heat inside the machine	The oil pipe is bent	Check if there are any bent positions in the oil pipe that prevent air from supplying oil.
Oil flowing through the exhaust pipe	Excessive pump oil volume/blocked atomization network/abnormal voltage	1. Manually pumping oil, if there is too much oil inside the machine, it will not ignite and emit white smoke. If the combustion chamber is filled with excessive pumping oil, it will flow out from the exhaust pipe; The correct way to pump oil to the inlet position and stop. If the pump oil volume is too high, the oil pipe should be unplugged and restarted 2-3 times to restore normal operation before inserting the oil pipe; Or use a hair dryer to blow towards the intake pipe for a period of time until it works properly.

		2. The ignition plug atomization net is blocked. After removing the ignition plug, take out the internal atomization net and check for any blockage. It should be cleaned or replaced immediately. 3. Referring to the fault code inspection of E-01, the ignition failed due to insufficient heat from the low point spark plug of the power supply voltage/current. The fuel pump continued to operate, and diesel flowed out through the exhaust pipe.
Oil flowing inside the intake pipe	Incorrect installation direction/excessive manual pump oil volume	1. Manually pumping oil, if there is too much oil inside the machine, it will not ignite and emit white smoke. If the combustion chamber is filled with excessive pumping oil, it will flow out from the intake pipe; The correct way to pump oil to the inlet position and stop. If the pump oil volume is too high, the oil pipe should be unplugged and restarted 2-3 times to restore normal operation before inserting the oil pipe; Or use a hair dryer to blow towards the intake pipe for a period of time until it works properly. 2. The heater cannot be installed on the side. The oxygen hole oil on the ignition plug side will flow out through the hole, and the correct installation method is to have the intake/exhaust port facing downwards.
The exhaust pipe temperature	Combustion chamber malfunction	Immediately shut down, dismantle the aluminum body to check if the internal combustion chamber is sealed or replace

is too high and turns red		the combustion chamber.
abnormal sound	Poor exhaust flow	Foreign matter blockage in the exhaust pipe affects the exhaust. It should be immediately shut down, and the exhaust pipe, muffler, and exhaust port should be checked for blockage. If there is any blockage, it should be cleaned and restored to normal operation.
Diesel odor	Oil leakage/fuel error	1. Only high-grade diesel can be used, and the use of mixed diesel, other types of oil, and non brand new oil products is prohibited. In winter, negative temperature diesel should be met, as other fuels may cause odors. 2. Disassemble the machine casing to check for any oil leaks inside and replace the parts promptly.
Plastic smell	Use external accessories	1. Extension or modification requires the purchase of high-temperature resistant accessories. If the heater has high heat, it may produce unpleasant and pungent odors. 2. Extend the pipe fittings without bending or being too long, as this can cause heat to be unable to dissipate and result in high internal temperature and plastic odor. 3. The working temperature of the exhaust pipe reaches around 752 °F. It is prohibited to drill holes in the wooden floor or use non high temperature resistant rubber seals for installation,

		which may cause odor and poisoning hazards.
Maintenance	Smoking/insufficient heat	If black smoke or insufficient heat is found during the operation of the heater for a period of time, it indicates that there is carbon deposition inside the combustion chamber and it needs to be cleaned or replaced in a timely manner.
Fuse burnt out	Short circuit power-off inspection	1. Remove the fuse and check for damage. If damaged, replace the fuse. 2. Measure whether the positive and negative poles are short circuited. If there is a short circuit, replace the motherboard if it is damaged.

