Fuel stove - pull-out stove

Technical description, installation, operating and maintenance instructions

product type

Diesel DC 12V

Plateau version 1.01

Preface

Thank you for using oil stove - pull-out stove

This manual explains the technical description, installation, operation and maintenance instructions for the oil-fired stove - pull-out stove . In order to ensure the correct use of the oil stove - pull-out stove , please read this manual carefully before installation and use. Please keep it in a safe place for reference after reading.

Notice:

- The contents of this manual are subject to change without further notice, but we can ensure that this manual is consistent with the purchased product.
- We try our best to clearly express the issues that users should know through the instructions. If you have any questions or find something inappropriate, please contact the company directly.
- When the user unpacks the product for the first time, please check the host and accessories against the packing list. If you find any problems, please contact the seller immediately.
- If a malfunction occurs during use, please contact the company's marketing department or the company's authorized customer service station. We will serve you wholeheartedly.

Notice

It must be installed and used in accordance with the instructions in the user manual. To ensure long-term use of the product!

Reserve the right to change

1. Use

FJH- 4.5/ 1 C type fuel stove - the pull-out stove (hereinafter referred to as the pull-out stove) is a special fuel stove for RVs with cooking functions.. This oil stove can also be used for outdoor cooking on ships and other places.

2. Main technical parameters

	Type III
Rated voltage	DC 12V
Short-term	8～10 A
average power	0.32 ～ 0.4A
heating power	1 ～ 4.5KW
Fuel type	Diesel fuel
fuel	100～450ml/h
Working	-40℃～+40℃
Working	≤5000m
Host weight	9.3kg
Overall	460×335×185

Table 1

3. Function

This oil-fired stove is a diesel stove with open flame combustion. This fuel stove is not allowed to be used while driving.

Adjust the heating power by controlling the switch to cook and heat various foods.

4. Safety instructions

safe working environment

--Danger of toxic exhaust fumes. Exhaust fumes from pull-out stoves in enclosed spaces (e.g. garages, repair shops) can be toxic if the vehicle is parked in a closed room. Therefore, in a closed space, it is necessary to turn off the fuel supply of the pull-out stove and turn off the pull-out stove through the control switch.

--Heat-sensitive objects (such as aerosol cans) or flammable materials/liquids cannot be stored in the same compartment as the equipment, as in some cases the area may be affected by high temperatures.

--Keep the combustion air inlet free of contamination (slush, ice, leaves, etc.) at all times.

Operator/owner obligations

--The vehicle owner is responsible for operating the equipment correctly.

--Fuel systems must comply with national technical and administrative regulations. National legislation and regulations must be followed.

Safe operation

--It is necessary to regularly check whether the installation firmness of the pull-out stove and whether the wires and oil pipes are intact, especially at the end of a long trip.

--When cleaning the vehicle, do not spray water directly into the pull-out stove.

5. Installation of pull-out stove

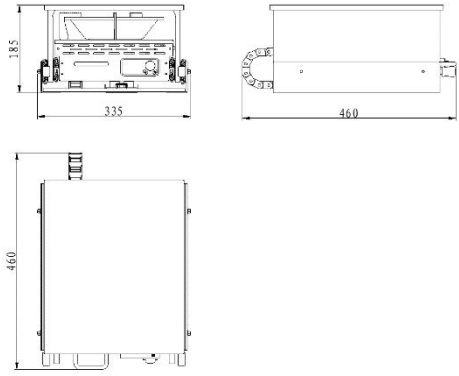


Figure 1

Typical installation diagram of a pull-out stove—Figure 1.

★It must be installed and repaired by professionals authorized by our company !

Our company will not bear an y responsibility once the following behaviors occur:

- - Modified pull-out stove and accessories
- -Failure to follow operating and installation instructions
- -Do not use our company's special accessories

Nylon drag chain installation

After taking the pull-out stove out of the packaging box, place it on the platform (Figure 2) and pull the nylon drag chain outward about 70mm (Figure 3). If the resistance is too great, shake the drag chain up and down.

Figure 2

Figure 3

Then pull out the outer rail of the pull-out stove into place and turn the pull-out stove sideways (Figure 4). There are two bolts fixed on the drag chain mounting plate. Use an Allen wrench to remove these two bolts (Figure 5, Figure 6).

Figure 4

Figure 5

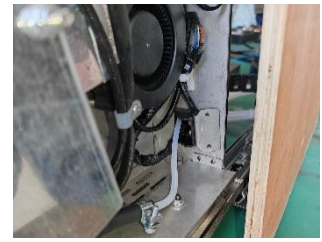


Figure 6

Pull the drag chain outside the pull-out stove and fix the drag chain mounting plate with the two bolts removed (Figure 7, Figure 8, Figure 9). Then the pull-out stove can be retracted (Figure 10).

Figure 7

Figure 8

Figure 9

Figure 10

Installation diagram of pull-out stove. As shown in Figure 11.

The pull-out stove should be installed horizontally, and the inclination angle should not exceed 5° from the upright level. If the oil stove is in operation with an excessive inclination angle (up to several hours), the equipment may not be damaged, but the

combustion effect will be affected and the
burner will not achieve optimal performance.

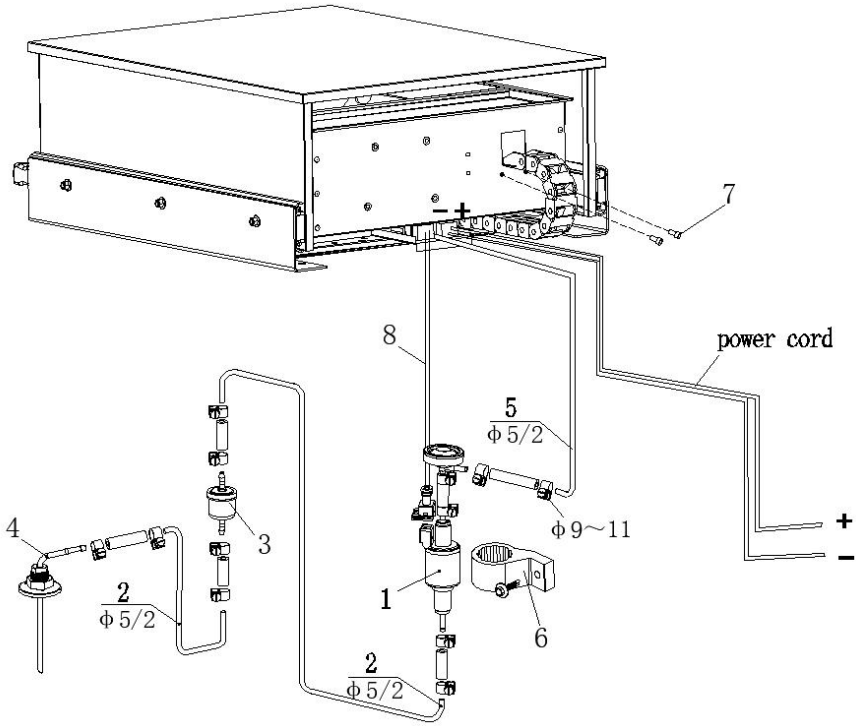
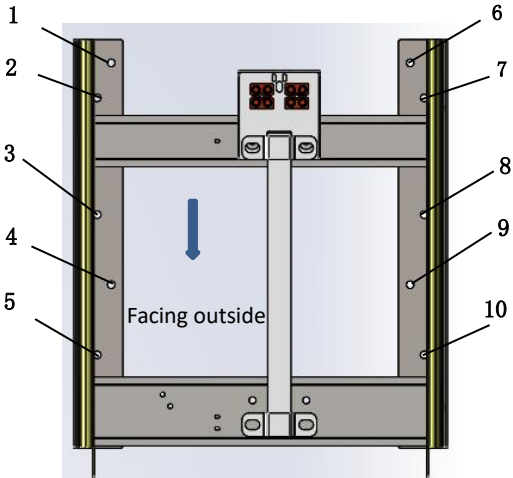


Figure 11

1-Oil pump; 2-Nylon oil pipe (blue, oil tank to oil pump); 3-Filter;
4-Oil suction pipe; 5-Nylon oil pipe (transparent, heater to oil pump);
6-Oil pump fixing sleeve; 7-Screw M4×8 (2 pieces); 8-Oil pump lead



Pull out the pull-out stove to reveal 10 screw fixing holes (Figure 12). All fixing bolts should be installed to ensure that the pull-out stove bracket is firmly fixed to the car body.

Make sure that the installation location is free of debris and other unreliable factors that may cause the control switch to accidentally touch and cause heating to start.

No covering may be added to the surface of the pull-out stove .

Warning: Violation of the above requirements may result in fire.

Fuel system connections

Fuel is extracted from the vehicle's fuel tank , and is delivered and regulated through a special fuel pump (provided by the manufacturer). No fuel is allowed to be withdrawn from the vehicle engine's return system or downstream of the vehicle's internal transfer pump. Please use the fuel hoses and lines included in the delivery for installation . Fuel should comply with national standards GB19147-2013 Vehicle Diesel Standard

In winter, fuels that meet low temperature requirements should be used, and biofuels are not allowed.

fuel piping system

Installation of oil pipelines

The oil pipeline must use local accessories, that is, nylon hose with good light resistance and thermal stability. Allowable fuel pipeline length : The maximum fuel pipeline length is 2 meters on the inlet side and 6 meters on the pressure side. As shown in Figure 13.

Safety regulations for fuel lines

Be sure to cut fuel hoses and lines to length with a hose cutter or sharp knife. The area being cut cannot be compressed and must be free of burrs. Fuel lines must be securely connected to prevent damage and/or noise caused by vibration (The recommended distance between connection points is approximately 50 cm). Fuel lines must be protected against mechanical damage. The laying of fuel pipelines will not adversely affect the stability of vehicle rotation and engine operation . Protect fuel-carrying components from high temperatures that may affect operation (use suitable fiberglass-lined aluminum thermally protected hoses). Never install or secure fuel lines near a fuel stove or vehicle engine exhaust pipe. If lines cross, maintain sufficient distance from hot components—and provide heat radiation shielding if necessary. oil pipe The installation location should be able to prevent the impact of flying stones and should be kept away from the heating parts of the vehicle. If necessary, a protective device

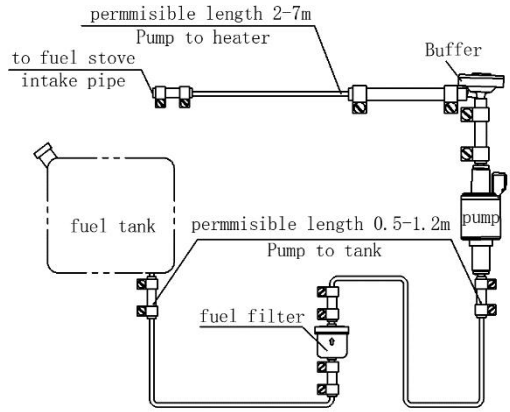


Figure 13

Oil pump installation

The oil pump should be fixed with the oil pump fixing sleeve (rubber). The oil pump

outlet should be inclined upward, and its installation angle should be selected within the range of 15° to 35° (Figure 5). When conditions permit, the oil pipe from the oil pump to the heater host should be gradually rise. To protect the oil pump from heat (maximum operating temperature 40°C), do not install it near the exhaust pipe.

The height difference between the fuel level and the oil pump and the height difference between the oil pump and the main engine oil inlet will generate pressure (or suction) in the oil circuit, so these dimensions should comply with the requirements in Figure 14 (in a closed fuel tank, Negative pressure will be generated. At this time, the minimum liquid level in the fuel tank is required to not exceed 0.4m).

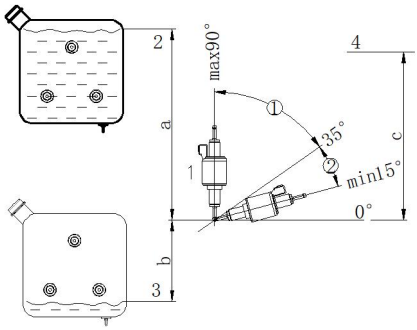


Figure 14

a≤3m， b≤0.5m (Avoid of negative pressure may be produced in sealed fuel tank.
In such case，b≤0.15m)　c≤2m.
1-Fuel pump　　2-Max.fuel level
3-Min.fuel level　4-Fuel inlet level
①Allowable installation angle
②Optimum installation angle

Connection between pull-out stove and oil pump

The oil pipe from the oil pump to the pull-out stove should be as upward as possible. Mark appropriate locations on the vehicle floor for passage
fuel line and fuel pump connection cables. Before drilling , be sure to check for hidden cables, fuel lines, frame sections, etc. underneath ! Then seal the edges of the opening in the vehicle floor with an underbody protector. In order to prevent the oil pipe and oil pump cable from being scratched, please add an introduction bushing or cross-section edge protection material.

The oil pipes should be bundled and fixed at suitable places, and the bundling spacing should not be greater than 50cm.

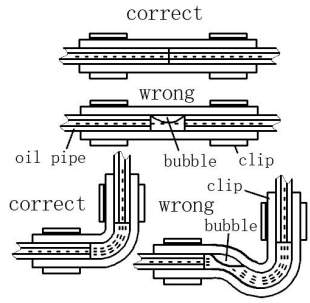


Figure 15

The connection between the oil pipe and the oil pump, pull-out stove, and oil tank (oil collector) should be made using the oil pipe joints provided with this machine and tightened with oil pipe clamps. Prevent bubbles from forming at the joint (Figure 15).

Installation of oil suction pipe (Figure 16)

Used when drawing fuel from the vehicle's own fuel tank. When installing, it should be noted that the size of the installation opening on the fuel tank (or fuel tank cover) is φ25±0.2, with neat edges and smooth surroundings to ensure good sealing with the oil suction pipe

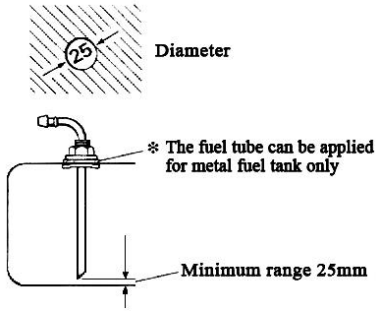


Figure 16

seat. The distance between the lower opening of the oil suction pipe and the bottom of the fuel tank is preferably 30-40mm, which can not only ensure full absorption of fuel, but also prevent the inhalation of impurities deposited at the bottom of the fuel tank.

control switch

The pull-out stove must be operated using a dedicated LCD switch.

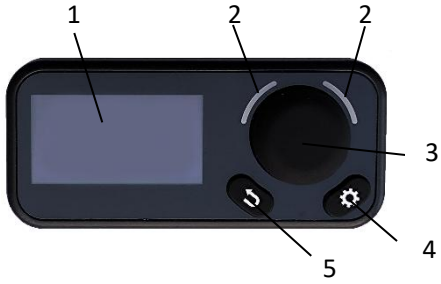


Figure 17

1-OLED Display screen

2-LED Indicator light

3-Rotate&Confirm Button

4-Set button

The LCD switch is powered on, the LED indicator light starts to flash and enters the initialization state, and stops flashing after the initialization is completed. If the LED indicator light does not respond when powered on, the LCD switch may not be connected properly or the main power supply may not be turned on. If the screen displays "Not Connected" after initialization is completed, there is a problem with the communication between the host and the LCD switch.

Electrical connections

Route wires to avoid chafing. If there are sharp edges, such as metal panel threads, use lead bushings or edge protection.

Connector cables must not be attached to or come into contact with metal surfaces, exhaust ducts, or hot air ducts.

DC12V power supply

The electrical wiring, switches and controls of a pull-out range must be located so as not to adversely affect its operation under normal operating conditions.

The pull-out range circuit has reverse polarity protection. If the controller is connected with incorrect polarity, the LED indicator will not work.

The length and cross-sectional area of the power cord are required to ensure that the allowable voltage drop is not greater than 0.5V when the voltage is 12V. It is recommended to

configure the power cord according to the table below

Wiring diagram

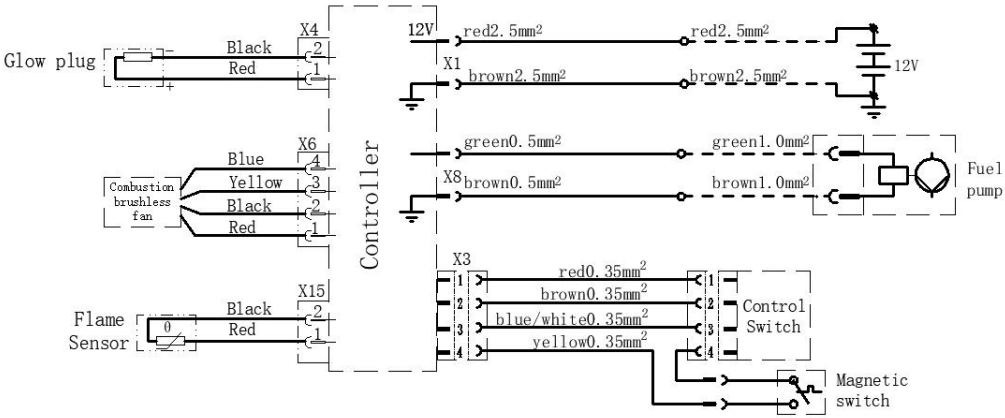


Figure 18

6. Operating instructions

Press the two-stage pull-out handles (Figure 19 -1, 2) respectively to pull out and lock the pull-out stove.

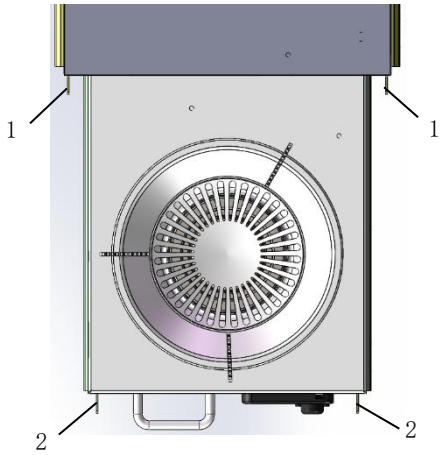


Figure 19

pressing the slide lock block to pull out the pull-out stove , stop pressing immediately after the lock block is opened to prevent the pull-out stove from falling off the track .

pushing or pulling the stove to prevent accidental startup of the equipment .

the pull-out stove to prevent accidents caused by objects touching the button switch .

Start the fuel stove

Use special LCD switch operation.

After power-on and initialization, press and hold the Rotate & Confirm button to start the pull-out stove and start working (if the LCD switch is turned off, press any key to light up the screen). The LED indicator lights up. When the LED indicator turns yellow, adjust the rotation & confirmation button to adjust the power steplessly. The power range of pull-out stoves is between 1000w and 4500w . Set the

Total length of positive and negative wires	Cross-sectional area
＜8m	2.5mm²
8～12m	4mm²
12～16m	6mm²

Troubleshooting methods for fault lock status			
serial number	**Fault display code**	**Fault name**	**Troubleshooting**
1	10	Startup failed	a. Check the fuel supply system b. Check whether the air inlet is blocked c. Check the glow plug and flame sensor
2	20	combustion interruption	a. Check the fuel supply system b. Check whether the air inlet is blocked c. Check the flame sensor

power gears 1-7, and the knob gears increase from left to right.

When the pull-out stove is working, be careful **not to touch the surface of the pull-out stove to prevent burns!**

Close the pull-out stove

When the pull-out stove is working normally, press and hold the Rotate & Confirm button , and the pull-out stove will immediately stop supplying oil and heat and enter the shutdown process .

The screen goes out and the pull-out stove is shut down.

the pull- out stove, push it with a little force to ensure that the slide lock block is locked to prevent equipment damage during driving!

7. Fault

General troubleshooting

During use, the pull-out stove may fail to start normally or may turn off and be in a malfunction lock state after starting.

state. At this time, long press the Rotate & Confirm button to turn off the pull-out stove, wait for the screen to display "Close" and then restart it.

The pull-out stove may cause circuit failure due to the following reasons: corrosion of joints, poor contact, incorrect plugging, corrosion of wires or fuses, corrosion of battery pile heads, etc. Pay attention to inspection and maintenance

during use to prevent these phenomena from occurring.

When the following situations occur, users can handle them by themselves:

eliminate:

● The pull-out stove does not start and the control switch indicator light does not light up after turning on the machine. The reason may be that the fuse is open, the wiring is wrong, or the pull-out stove is not pulled out in place; in addition, check whether the plug on the control switch lead is correctly connected to the host .

fault lock state

Failures caused by the pull-out stove will be displayed by the LED indicator light on the

Troubleshooting methods for fault lock status			
serial number	**Fault display code**	**Fault name**	**Troubleshooting**
3	30	Voltage is too high	a. Check the power supply system
	31	Voltage too low	
4	41	The combustion chamber is too high before ignition	a. Check whether the air inlet is blocked
5	50	Flame sensor open circuit	a. Check the flame sensor lead b. Check the flame sensor
	51	Flame sensor short circuit	
6	70	Oil pump circuit breaker	a. Check whether the oil pump lead is damaged b. Check whether the oil pump lead connection is reliable c. Repair oil pump d. Replace the motherboard
	71	Oil pump short circuit	
7	80	Combustion fan circuit breaker	a. Check the combustion fan lead connection b. Check the combustion fan c. Replace the motherboard
8	90	Glow plug open circuit	a. Check the power supply voltage b. Check the resistance of the glow plug at normal temperature (0.2Ω/12V) c. Clean the carbon deposits on the glow plug d. Replace the motherboard
9	E0	No start signal	a. Replace the motherboard
	E1	Glow plug drive voltage not detected	

LCD switch flashing with an interval of 0.5s .
The fault name and fault code are displayed on the OLED screen.
Press and hold the Rotate & Confirm button to exit the fault lock state.
Troubleshooting can be performed according to the methods listed in Table 2 .

8. Precautions

● First installation

– The pull-out stove is installed for the first time. In order to completely eliminate the air in the fuel supply system and fill the fuel pipeline with fuel,

a quick oil pump function is specially designed. The LCD switch is powered on. After

initialization, short press the setting button to enter the information interface, select the working time option, long press the return and setting buttons (at the same time) to enter the "Start fast pumping" confirmation interface, short press the confirmation button to enter the quick Pump oil status . The default time for quick oil pumping is 90 seconds, and the time can be adjusted by rotating the " Rotate & Confirm Button". If you press the return button briefly during rapid oil pumping, the rapid oil pumping will stop.

– A test run should be carried out before using the pull-out stove. All connections should be carefully checked for leakage and safety during commissioning. If there is heavy smoke emission, abnormal combustion noise or fuel smell, the pull-out stove should be turned off and the fuse should be unplugged so that it cannot operate. It can only be used after being inspected by professionals.

– There may be a brief smell when using the pull-out stove for the first time. This is normal within the first few minutes of operation and does not indicate a malfunction of the oil stove.

●Maintenance

– During maintenance, a professional inspection must be carried out and the following maintenance work must be performed:

Check the hob for contamination and foreign matter.

Clean the outside of the pull-out range.

Check the circuit connectors for corrosion and looseness.

Check the fuel lines for leaks.

●Long-term shutdown

– When the pull-out stove **is not used for a long time, it should be run once every 4 weeks for about 10 minutes each time to prevent the combustion fan and other mechanical parts from malfunctioning** (hardening).

– When replacing low-temperature fuel, the pull-out stove should be run for at least 15 minutes to fill the fuel system with new oil.

●The life of the pull-out stove

– The pull-out stove cannot be used for more than 10 years. After expiration, genuine parts must be used and replaced by the pull-out stove manufacturer or its authorized agent.

●Other precautions

– During transportation and storage of the pull-out stove, the ambient temperature should not exceed the range of -40°C to 85°C to prevent damage to electronic components.

–Only authorized customer service stations are allowed to install and repair pullout stoves, and the use of non-original parts is prohibited to avoid danger.

– If the pull-out stove is damaged due to improper installation or operation, the manufacturer will not be responsible for the warranty.

– The pull-out stove must be switched off

before refueling.

– When welding a car, you should first remove the positive power cord of the pull-out stove from the battery and ground it to prevent damage to the controller.

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