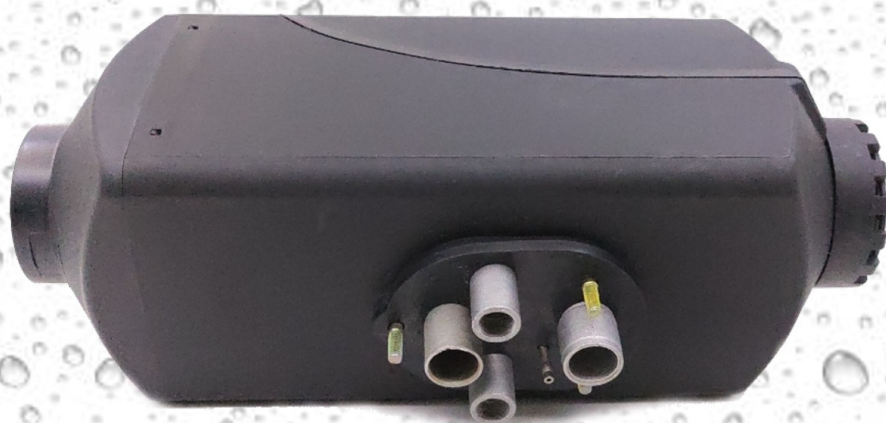


# Trales alpine Hydro-hybrid 7kw

## User manual



WATER



FIRE



AIR

English

## Operation mode

- 1. Power on: press and hold the switch 3Seconds**, release the switch once display appears interface for startup, at start up or change of power output, the data will appear unstable, please wait patiently for the machine to stabilize before reading data or making other changes.
- 2. Shutdown: press and hold the switch 3Seconds**, release the switch once display appears shutdown interface, then machine starts a cool down program to avoid damages. The the machine will shut down completely after cooling down.
- 3.** If display or machine does not respond to commands, reset the unit by unplugging the power cables for 5 seconds.
- 4.** If the machine displays an error code, it is impossible to shut down before cool-down procedure is done. wait for the fan to reduce the machines temperature. The display will always notify you regarding the code error that occurs.
- 5.** If the machine is turned on but the machine body temperature is higher than 50°C the machine will automatically begin a cool-down process. When the cool-down process is completed, the machine will work normally.

## Caution

- 1.** After the machine is installed for the first time, HOLD the **“Inject oil”** button in order to completely fill the fuel line with diesel.
- 2.** Conduct a test run before using the machine. During the test run, carefully check the leakage and safety condition of all connections. If there is excessive smoke emission, abnormal combustion noise or fuel smell, the machine should be turned off and the fuse should be pulled out so that it cannot run. Use only after overhauled by professionals.
- 3.** Before each heating season, an inspection must be carried out by qualified professionals to implement the following maintenance work.
  - a)** Check for contamination and foreign objects in the air inlet and outlet.
  - b)** Clean the exterior and interior of the machine.
  - c)** Check circuit connectors for rust and looseness.
  - d)** Check if there is any leakage in the fuel line.
- 4.** When the machine is not used for a long time, it should be run once every 6 weeks, working for about 10 minutes each time. The oil pump, water pump, tee and combustion air fan prevent the mechanical parts from running out of order (solid death).
- 5.** The air inlet and outlet of the machine must be kept free of blockage and dirt, so that the warm air duct is unobstructed to prevent overheating.
- 6.** When replacing the use of low-temperature fuel, the machine should be run for at least 15 minutes to fill the fuel line and fuel pump with new oil.
- 7.** The heat exchanger of the machine should not be used for more than 10 years. When it expires, it must be replaced with genuine parts, by the machine manufacturer or its authorized agent. At this time, the superheat sensor must also be replaced at the same time.
- 8.** If welding operations is going to be made to the car, first remove the machine's power positive and negative wires from the battery to prevent damage to the machine.
- 9.** Only authorized customer service stations are allowed to repair the machine, and the use of non-original parts is prohibited to avoid danger.
- 10.** The manufacturer is not responsible for the warranty if the machine is damaged due to unpacking or installation or operation without following the regulations.

# Product introduction and use function

 <p>Cold air → Hot air ← Combustion air ↓ Exhaust ↓</p>	<p>The heater runs on diesel fuel. The cold air passes the heat Exchanger and hot air is sent to cabin for the purpose of heating and defrosting.</p>	
<p>Hydro-hybrid aluminum body</p> 	<p>The combustion chamber is made of pure stainless steel and the body is made of aluminum. Aluminum has a high thermal conductivity which helps transport the heat into the liquid and the air. A big liquid heat exchanger makes the heating efficient and reduces the time of the heating process.</p> <ol style="list-style-type: none"> <li>1. Preheat and protect the engine</li> <li>2. Heat the shower water</li> <li>3. Heat the water-based floor heating</li> <li>4. Defrost and heat the air of the cabin</li> </ol>	
<p>Control display</p> 	<p><b>Button function of control display</b></p> <ol style="list-style-type: none"> <li>1. Inject oil - HOLD to quickly fill the fuel line. (priming)</li> <li>2. Plateau - use at an high elevation to adjust fuel mix, more than 1500 meter.</li> <li>3. Switch&amp;shift key - press this button to start up and shutdown the machine, spin button to adjust power output.</li> <li>4. Upgrade - press this button to activate automatic circulation mode. water pump would be activated automatically when temperature reaches 90°C and would be automatically shutdown after 1 hour.</li> <li>5. Water pump – Press to manually activate and deactivate the water pump.</li> <li>6. Precautions: the water pump of the machine must be turned off before Starting the car engine.</li> </ol>	
<p>Oil pump</p> 	<p>Water circulation pump</p> 	<p>Wire harness</p> 

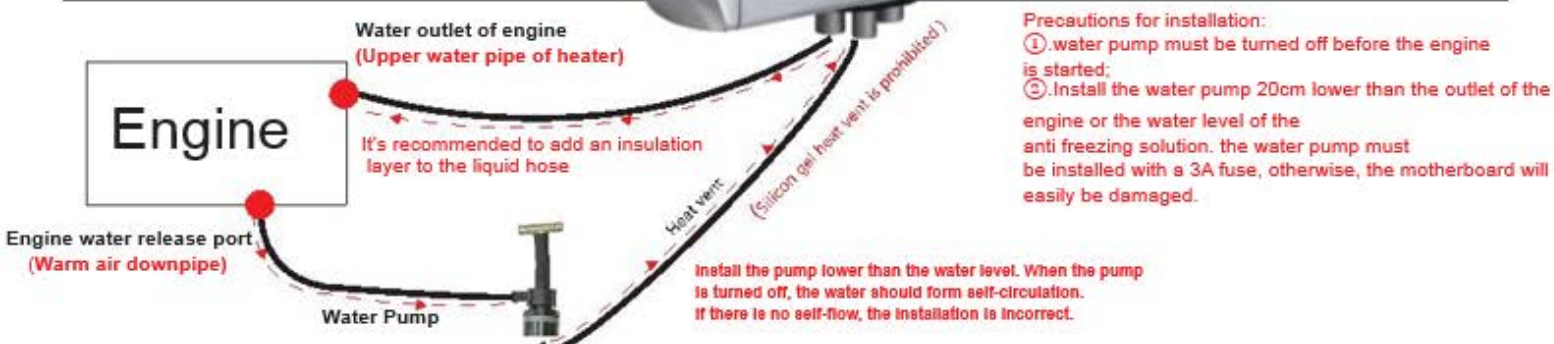
## chematic for installation of the Hydro-hybrid

(suitable for 0-165 HP engine)



**Flatness must be ensured when the host is installed**

An interval of 20cm should be made in front of, behind, on the left and on the right of the host



# Fault codes

When the heater is malfunctioning the control will display a fault code which explains what the problem is.

Error Code	Cause of failure	Processing method
1	Water pump fault	<ol style="list-style-type: none"><li>1. Check whether the water pump is short-circuited or if the connector is loose.</li><li>2. Check whether the water pump enters the air and vent air.</li><li>3. Check the fuse. Use no bigger than 3A.</li></ol>
2	High voltage	Normal range 12V (8V-16V), 24V (19V-32V), check whether the electricity of the power source is too high.
3	Oil pump fault or bad contact	<ol style="list-style-type: none"><li>① Check whether the oil pump cable connector is loose.</li><li>② Press the "inject oil" key to confirm whether the oil pump is working normally.</li></ol>
4	glow plug fault	<ol style="list-style-type: none"><li>① Check whether the the ignition plug connector is loose.</li><li>② Check whether the ignition plug is conducted by using the multimeter. If not, it indicates that the ignition needle is damaged and the ignition needle should be replaced</li><li>③ Unplug the main power source and the machine will reset.</li></ol>
5	Fan motor fault	<ol style="list-style-type: none"><li>① Check whether the fan motor connector is loose.</li><li>② Check whether there is an foreign object blocking the movement of the fan.</li><li>③ Check whether the main board is fixed on the body.</li><li>④ Unplug the main main power source and it will reset.</li></ol>
6	Temperature sensor	<ol style="list-style-type: none"><li>① Check whether the temperature sensor connector is loose.</li><li>② Unplug the main main power source and the machine will reset.</li></ol>
7	Unsuccessful start	<ol style="list-style-type: none"><li>① Try again.</li><li>③ make sure there is no exhaust gas mixing and entering the combustion air.</li><li>② Check whether the diesel tank is out of diesel.</li><li>④ Check whether the diesel line is frozen or blocked.</li><li>⑤ Check whether the oil pump is blocked.</li><li>⑥ Check the diesel filter.</li><li>⑦ Check if the small holes on the diesel tank cover is blocked so that no air can enter.</li><li>⑧ Check of the fuel pump works normally by holding the "inject oil" button.</li><li>⑨ Check of the ignition plug is covered with black soot, this will make ignition impossible.</li></ol>
8	High temperature	<ol style="list-style-type: none"><li>① High temperature alarm <math>\geq 245^{\circ}\text{C}</math></li><li>② Check whether the air inlet is blocked.</li></ol>
9	Oil-lacking fault	<ol style="list-style-type: none"><li>① Check whether the oil tank is out of oil.</li><li>③ Check whether the oil pipe is unobstructed.</li><li>② Check whether the oil pipe and oil line is frozen.</li><li>④ Whether the oil pump is working normally.</li></ol>

## Note:

1. During the use of heater; if the elevation is higher than 1500 meters, plateau mode must be active so that the high temperature alarm and heaped carbon will not be produced.
2. At the time of installation, the air inlet of the heater and the front and back and two sides must be 15cm away from the edge. It is prohibited to place any combustible objects on and around the the heater during using it.