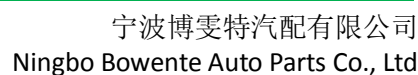


## Heater Fault Service





## Safety Setting of Heater

When the flare extinguishes in the process of heater running, the heat will restart. Within 90 seconds after the electromagnetic oil pump starts, if the heater is not ignited, the machine will then experience fault shutdown, and will stop after the fan runs in cooling state for approximately 4 minutes, simultaneously, combustion indicator will flash for warning.

The machine will stop after the fan runs in cooling state for approximately 4 minutes, simultaneously; combustion indicator will flash for warning.

When the heater detects faults on motor, overheat sensor, flare sensor, temperature sensor, ceramic ignition plug, electromagnetic oil pump, and/or voltage or circuit, combustion indicator will flash for warning.

### Please Note!

Try to restart to start heater.

Restarting should not be more than 3 times.

## Indicator Flash

Fault Indicator Flash Details Below:

[illegible]

**Ningbo Bowente Auto Parts Co., Ltd**

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TEL: 0086 0574-55664791

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When the heater experiences fault, the combustion indicator will flash for warning. The times of flashing go with various fault codes. The fault codes and trouble-shooting methods are seen below.

| Fault Code | Fault Type                   | Fault Cause   | Trouble Shooting Method  |
|------------|------------------------------|---|--|
| 1          | Over Voltage or Less Voltage | Supply Power Beyond DC20V-30V                           | Use AVO meter to test voltage condition, if the voltage is lower than DC20V-30V, please charge battery or have the battery replaced; if the voltage is higher than DC30V, please change the supply power |
| 2          | Over Heat Fault              | The air inlet or outlet blocked or ventilation not free | Check if it is blocked or not free, if so, please clear it   |
|            |                              | Smoke exhaust blocked or not free                       | Check if it is blocked or not free, if so, please clear it   |
| 3          | Flare Sensor Fault           | Sensor not properly connected                           | Check if it is properly connected or lead wire is loose, if so, please connect properly  |
|            |                              | Sensor lead wire short circuit or broken circuit        | Use AVO meter to test if lead wire has short circuit or broken circuit, if so, please repair or replace  |
|            |                              | Sensor damaged  | Use AVO meter to test if sensor is damaged, if so, please replace it   |
| 4          | Motor Fault                  | Motor not properly connected                            | Check if it is properly connected or if lead wire is loose, if so, please connect properly   |
|            |                              | Lead wire short circuit or broken circuit               | Use AVO meter to test if lead wire has short circuit or broken circuit, if so, please repair or replace it   |
|            |                              | Motor damaged   | Test motor when power connected to check if it is running properly, if not, please replace it  |
| 5          | Ignition Plug Fault          | Ignition plug not properly connected                    | Check if it is properly connected or if lead wire is loose, if so, please connect properly   |
|            |                              | Lead wire short circuit or broken circuit               | Use AVO meter to test if lead wire has short circuit or broken circuit, if so, please repair or replace it   |

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|   |                                |   |  |
|---|--------------------------------|---|--|
|   |                                | Ignition plug damaged                     | Use AVO meter to test the resistance value of the two lead wires, if the value is not in the range of 1-4 ohm, replace it please   |
| 6 | Over Heat Sensor Fault         | Sensor not properly connected             | Check if it is properly connected or if lead wire is loose, if so, please connect properly   |
|   |                                | Lead wire short circuit or broken circuit | Use AVO meter to test if lead wire has short circuit or broken circuit, if so, please repair or replace it                         |
|   |                                | Sensor damaged                            | Use AVO meter to check if sensor is damaged, if so, replace it please  |
| 7 | Electromagnetic Oil Pump Fault | Pump not properly connected               | Check if it is properly connected or if lead wire is loose, if so, please connect properly   |
|   |                                | Lead wire short circuit or broken circuit | Use AVO meter to test if lead wire has short circuit or broken circuit, if so, please repair or replace it                         |
|   |                                | Pump damaged                              | Use AVO meter to test the resistance value of the two lead wires, if the value is not in the range of 15-25 ohm, replace it please |
| 8 | Temperature Sensor Fault       | Lead wire short circuit or broken circuit | Use AVO meter to test if lead wire short circuit or broken circuit, if so, please repair or replace it                             |
|   |                                | Sensor damaged                            | Use AVO meter to check if sensor is damaged, if so, replace it please  |
| 9 | Ignition Failure               | 1.No fuel in the tank                     | Check if there is fuel in the tank, if no, please fill   |
|   |                                | 2. Oil pipe blocked or damaged            | Check if pipe is blocked by foreign matters, if all connection points are properly done, if not, please repair or replace them     |
|   |                                | 3.Fuel condensed and pipe blocked         | Check if fuel is condensed, if so, please change it to low temperature oil that suits environment                                  |
|   |                                | 4.Smoke exhaust blocked or not free       | Check if it is blocked or not free, if so, please clear it   |
|   |                                | 5.Controller Fault                        | Replace controller   |

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|    |                  |                       |  |
|----|------------------|-----------------------|--|
| 10 | Flare Extinguish | No fuel in the tank   | Check if there is fuel in the tank, if no, please fill |
|    |                  | Ignition sensor fault | Trouble shoot or replace                               |

**Please note!**

The fault alert only indicates the cause of the shutdown, and does not necessarily mean components of the heater are damaged. Restart the heater is advised.

When the heater experiences fault, machine should only be started after trouble shooting is done.

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## **Fault/Maintenance/Service**

### **In case of fault, check the following:**

- .The heater cannot start after switching on the machine. ----Switch off the machine and restart.
- . If the heater still cannot start, check the following:
  - if there is any fuel in the tank?
  - if the fuse is working?
  - if the circuit, connection, connector is working?
  - if the air inlet and/or outlet system, fuel combustion boosting system, exhaust system is working?

### **Trouble Shooting**

If the above is working, and the heater is still faulty, or does not function properly, please contact the authorized service provider of Ningbo Bowente Auto Parts Co., Ltd for repair and maintenance.

### **Please Note!**

If the repair and maintenance are done by non-authorized service provider or some components are provided by the third party, the heater will not be entitled to any warranty.

### **Maintenance Statement**

- .Except the time when the heater is being used, the heater should be started for 10 minutes every month.
- .In the event that the heater has been idle for long time, to use it again, please check if the inlet/outlet system, combustion boosting system, and the exhaust system are working, cleaning is needed when necessary.
- .Before heating season arrives, commissioning to the heater should be done. If the heater produces thick smoke, or generates abnormal sound, the heater should be switched off and have the fuse removed. Checking should only be done by Ningbo Bowente authorized service provider.

### **Service**

If you have any technical queries, or have any problem with the heating equipment, please call 0086 0574-55664791 or write Email for service.

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