7.2 Before you call for service

This section explains troubles undetected in chamber self-checks and cases of misoperation (easily mistaken as trouble). If the trouble cannot be fixed after taking the prescribed action, contact the place of purchase or ESPEC CORP.

⚠ WARNING

ELECTRIC SHOCK! Before working on the power circuits on the primary side of the main power switch (breaker), shut OFF primary power supply and check the line is dead. Also, take measures to prevent accidental charging.

Working with primary power supply ON runs the risk of electric shock.

Shut OFF power from the main power switch (breaker) BEFORE detaching the electrical compartment panel, the machinery compartment panel or front panels.

Table 7.2 Before you call for service

Trouble	Cause	Remedial action
The operation panel does not light up after pressing the POWER key.	Primary power supply is OFF.	Activate the primary power supply.
	The main power switch is OFF.	Set the main power switch ON.
	The electrical compartment or a front panel is open.	Close the panel.
	There is a reverse or open phase in the primary power supply connection.	Reconnect the primary power supply correctly. See "4.7 Power supply work".
	Fuse blew.	Replace fuse. See "7.3 User practical servicing". If the new fuse blows, call for service.
The display goes out all of sudden or the displayed information is strange.	System trouble or internal board trouble.	Switch the main power OFF and ON. If the same trouble occurs again, call for service.
The door is hard to close.	Something is caught in the door.	Remove the obstruction.
	Frost has formed and hardened on the door packing.	Run a dry cycle.
	Air pressure is low.	Raise pressure to 0.5 MPa or more and close the door.

Trouble	Cause	Remedial action
The door is hard to open.	Air pressure is low.	Raise pressure to 0.5 MPa or more and open the door.
	Frost has formed and hardened on the door packing.	Run a dry cycle.
Strange noises are heard.	The air circulator is frosted over.	Call for service.
	The air circulator is burned.	
Strange odors are detected.	Lingering odors inside the chamber	Clean the test area. See “6.3 Maintenance”.
	Specimens are generating odors.	There is nothing wrong with the equipment. Proceed as planned.
The chamber is wet on the outside.	The room is highly humid.	There is nothing wrong with the equipment. Proceed as planned.
The door is wet around the edges.	The room is highly humid.	There is nothing wrong with the equipment. Proceed as planned.
	Fuse F3 blew.	Replace fuse F3. See "7.3 User practical servicing". If the new fuse blows, call for service.
Temperature is unstable.	The door is open.	Shut the door.
	The rubber plug fell off the cable port.	Fit the plug into the port.
	Room temperature changes more than 5°C/hr.	Stabilize room temperature and resume testing.
	High heat load equipment is being turned ON/OFF.	Reduce the heat load.
	Specimens are blocking air flow.	Reduce the amount of specimens.
Temperature gradually rises higher than the target temperature.	Specimens are generating heat.	Reduce the amount of heat generated by specimens.
	Frost has formed on the cooler.	Defrost the chamber. See "7.3 User practical servicing".
Settings cannot be changed.	The keys are locked.	Unlock the keys.
Temperature rises (lowers) too slowly.	Water temperature is too high.	Lower water temperature.
	Specimens are generating heat.	Reduce the amount of specimens.
	Ambient temperature is too low (high).	Raise (Lower) ambient temperature.
Poor temperature uniformity.	Air flow inside the chamber is poor.	Improve air flow.
	Specimens are generating heat.	Reduce the amount of specimens.
	Frost has formed on the cooler.	Defrost the chamber. See "7.3 User practical servicing".
Temperature control destabilizes near -40°C.		There is nothing wrong with the equipment. Proceed as planned.

Trouble	Cause	Remedial action
The chamber is wet on the outside after testing ends.	Testing was stopped during low temperature exposure.	Before stopping tests, run a dry cycle.
	The room is highly humid.	There is nothing wrong with the equipment. Proceed as planned.
Primary power shuts OFF during tests.	The electrical compartment panel or front panel is not securely closed.	Close the panel.
Control power shuts OFF during tests.	Fuse is blown out.	Replace fuse. See "7.3 User practical servicing". If the new fuse blows, call for service.
The door does not open/close.	Something is caught in the door.	Remove the obstruction.
	The main power switch is OFF.	Set the switch ON.
	Air pressure is low.	Raise pressure to 0.5 MPa or more and open/close the door.
	The door was opened while testing was in progress.	Restore the setup hold state, and then open/close the door.
“GO!DEFROST” (in yellow characters) is displayed on the monitor, and an alarm sounds.	Frost starts to form on the evaporator, and the controller induces defrosting. If the operation continues as is, the refrigerator will not work normally.	Defrost the chamber. See "7.3 User practical servicing".

7.3 User practical servicing

7.3.1 Fuse replacement

When a fuse blows, replace it with a new one.

Note If a new fuse blows as soon power is turned back ON, contact the place of purchase or ESPEC CORP.

For details on how to replace a fuse, see “6.3.7 Fuse replacement”.

7.3.2 Defrosting

Defrost the cold accumulator and evaporator if any of the following occurs:

- If temperature gets out-of-control during low temperature exposure and gradually begins to rise
- If low temperature exposure is not restored or restored slowly
- If the “FROSTED OVER” alarm appear on the display

Procedure

1. Check the main power switch is ON.
2. Press the ○ POWER key on the operation panel to activate power to the instrumentation.
3. The starting screen will appear. Touch it anywhere to display the main menu.
4. Press the ○ OPER/STOP key on the operation panel or the operating status box in the top left-hand corner of the screen.
5. Press the [M DEFROST] button below Operation Mode.
6. A screen will pop-up to confirm your selection. Press [Yes]. Defrosting will start.
7. When the defrost cycle ends, the chamber will stop.

7.3.3 Drying

Run a dry cycle if any of the following occurs:

- If the chamber stops during low temperature exposure because of an alarm or power failure
- After stopping the chamber
- When condensation forms inside the test area

Procedure

1. Check the main power switch is ON.
2. Press the ○POWER key on the operation panel to activate power to the instrumentation.
3. The starting screen will appear. Touch it anywhere to display the main menu.
4. Press the ○OPER/STOP key on the operation panel or the operating status box in the top left-hand corner of the screen.
5. Press the DRY MODE button below Operation Mode.
6. A screen will pop-up to confirm your selection. Press Yes. Drying will start.
7. When the dry cycle ends, the chamber will stop.