



Electrolux

© ELECTROLUX HOME PRODUCTS
Customer Care - EMEA
Training and Operations Support
Technical Support

SERVICE MANUAL

Refrigeration

Freezer
Mechanical Control

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INTRODUCTION

Purpose of this manual

The purpose of this manual is to provide service personnel (who already have the basic knowledge necessary for repairing refrigerators and freezers) with information on freezer appliances.

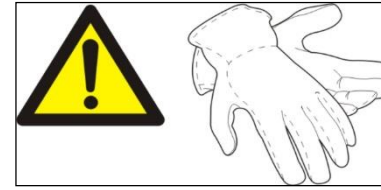
CAUTIONS



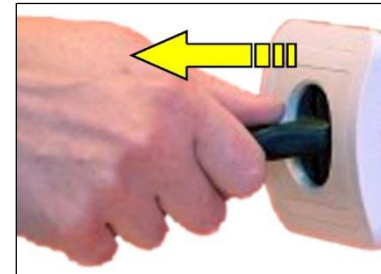
- Before starting work on an appliance, check that the earth in the lodgings is working properly by using an appropriate tool and follow the instructions described/illustrated on the Electrolux Learning Gateway portal

<http://electrolux.edvantage.net>

- When the work is finished check that the appliance's safety conditions have been reinstated, as though it were straight off the assembly line.
- In the event of replacing electrical parts, carefully check that the earthing and all the connections have been re-connected professionally.
- To handle/replace the circuit board, use the kit.



- All the work to be performed inside the appliance requires specific skills and knowledge and may only be carried out by qualified and authorised service engineers.
- Some of the components in the mechanical part could cause injuries, so wear suitable protection and proceed with caution.



- This appliance is not fitted with a switch that completely disconnects the power supply, so before you access internal components, and take the plug out of the socket to disconnect the power supply.
- When replacing components, please refer to the code shown in the list of spare parts relating to the appliance

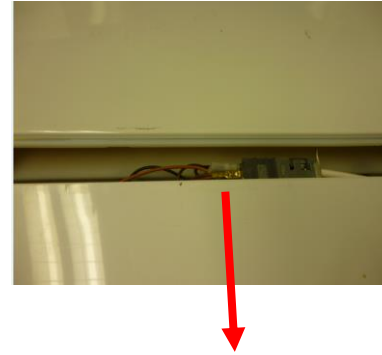
INSTRUCTION OF REPLACING THE THERMOSTAT

The thermostat is located in the top panel of freezer.

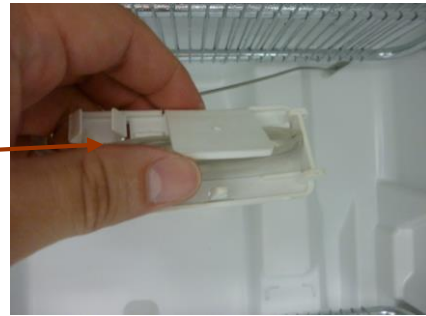
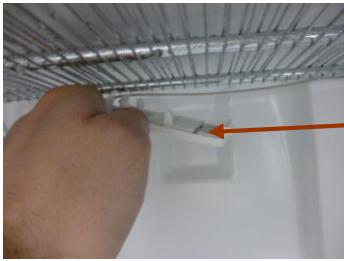
1. Unscrew the top panel by removing the two screws.



2. Remove the top panel



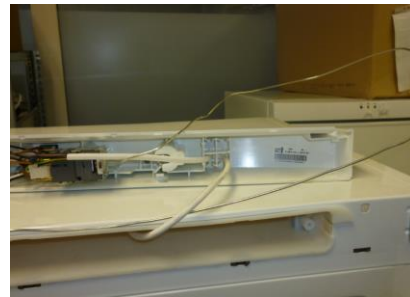
3. Remove the capillary holder then detach the capillary tube from the holder



4. Remove the plastic tube from the capillary then straighten it



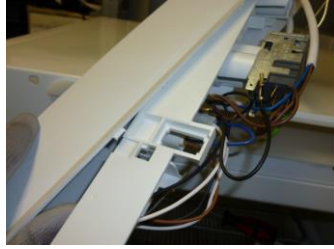
5. Pull out the capillary



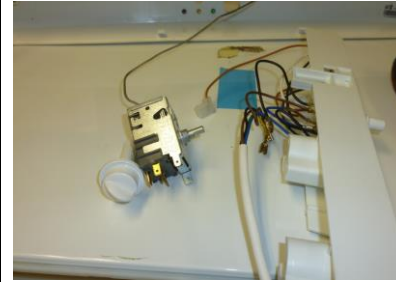
6. Remove the faulty thermostat



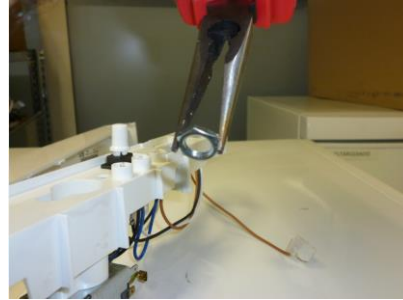
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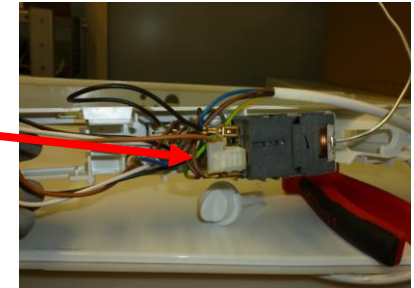
8. Exchange the faulty thermostat



7. Take out the control unit from the panel then remove the temperature regulation button

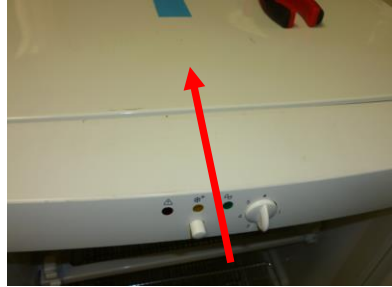
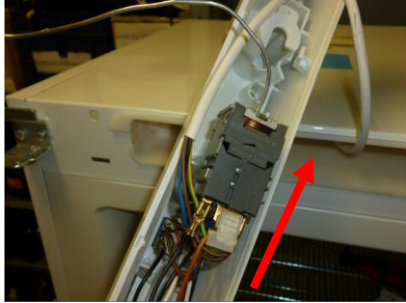


9. Place the thermostat into the control unit then fix the control unit into the top panel



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10. Fix back the top panel



11. Fix the capillary to the capillary holder



12. Fix the top panel with the screws



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TROUBLESHOOTING

Check the problem by observing			
Request	Details		
a) Check whether the temperature is according to the specifications	Temperature should be between 10-43 degrees	b)Check the outside tube	<ul style="list-style-type: none"> the suction pipe the exhaust pipe welding the connection of drying filter and whether it is prone to leak Checking method is to wipe the connection of the tube with a piece of white cloth and see if there is oil. If there is, it is leakage.
b) Good ventilation with enough room for heat dissipation around the freezer	The appropriate space for running unit will be below: Freezer two sides $\geq 20\text{mm}$		
c) Whether the voltage range meet the requirement of the rating plate	On normal conditions voltage fluctuation is allowed to be between 10% of rated voltage whilst if it exceeds or changing often the compressor would be effected and even burned down. When voltage is too high the motor coil will be burnt down whilst if it is too low, it would be difficult for the compressor to restart and too frequent restarts would burn down of the motor.	Define default by temperature	
Check if the freezer's appearance and internal parts are in good condition		a)Check the default by measuring compressor's temperature	When the compressor is in normal operation it will obviously hot.
a) Check the gasket	Open the freezer door to see whether the gasket is tight and if there is gap between the cabinet and seal.	b)Check the default by measuring dry filter's temperature	When the dry filter is in normal condition, it will be obviously a little hot.
b) Check the door switch	If the lamp is in good condition but it doesn't work when you open the door --check the door switch	c)Check the default by measuring suction tube's temperature	When the suction tube is in normal condition, it will be obviously cold.
c) Check the thermostat knob	Checking the location of thermostat knob is directly connected with the freezer's cooling.	d)Check the default by measuring discharge tube's temperature	When the discharge tube is in normal condition, it will be obviously a little warm.
Observe all parts of the freezer		e) Check the default by measuring condenser's temperature	When the condenser is in normal operation by testing its temperature we can assure that the temperature from the entrance to the exit is regressive (the entrance is hotter than the exit).
a) Check the cooling speed	Check the cooling speed of freezing cabinet with electronic thermometers. Check whether the freezer is able to lock the cooling and if it is in good cooling condition.	f)Check the default by touching the evaporator	During normal operation, there is frost on the evaporator that should not be easy to remove.
b)Check the outside tube	Check the freezer's pipeline system. Check if there is leakage: Carefully examine: <ul style="list-style-type: none"> the seal of process tube 	Define default by running noises	
		a)Check the compressor's noise	When the compressor is running, it shall go with rhythmic low-frequency sound.
		b)Check the freezer flow's noise	If there's "sisi" sound between capillary and evaporator's transition, the freezer works normally

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Problem	Cause
Freezer can't start	1.1 Is the power cord connecting well? 1.2 Is the power voltage too low? 1.3 Is the thermostat irrational setting? 1.4 Is the circuit on power? 1.5 Is there some default in compressor 1.6 Is the refrigeration system is blocked by ice or dirt, please stop the unit and restart after 10 minutes to see if the compressor can restart
Weak cooling effects	2.1 Is there any heat source around the freezer? 2.2 Is there enough space around the freezer for rejection of heat? 2.3 Is the setting of the thermostat appropriate? 2.4 Is there too much food or overheated food in it? 2.5 Have you opened the door frequently? 2.6 Is the door completely closed? 2.7 Is the gasket destroyed or distorted? 2.8 Does the refrigeration leak?
The unit cannot stop running	3.1 Is there any heat source around the freezer? 3.2 Is there enough space around the freezer for rejection of heat? 3.3 Is the setting of the thermostat appropriate? 3.4 Is there too much food or overheated food in it? 3.5 Have you opened the door frequently? 3.6 Is the door completely closed? 3.7 Is the gasket destroyed or distorted? 3.8 Is the thermostat operating well? 3.9 Does the refrigeration leak?
There is too much frost and ice inside of the appliance	4.1 Is the setting of the thermostat appropriate? 4.2 Is there high-moisture food or is the food too close to the back wall of the freezer? 4.3 Is the ambient temperature too low? 4.4 Are the electric parts in good condition? (especially the thermostat which is, in case of failure will be out of control and the appliance will work continuously.
Abnormal noise	5.1 Is the freezer placed stably? 5.2 Does the freezer bump other objects? 5.3 Is the internal accessory of the freezer in the right place?

	5.4 Is the water plate of compressor fallen out from the unit? 5.5 Does the tube of the refrigeration system bump each other? 5.6 The noise sound likes water flow inside the freezer in fact it is normal. This is caused both when the freezer starts and shutdowns; in addition, frost dissolving causes this sound too, which is a normal phenomenon. 5.7 When the cabinet or cabinet accessories are contracting or expanding there will be a cracking sound that is normal. 5.8 The operation sound in the compressor seems to be louder at night or when the appliance starts running-- that is a normal phenomenon. Uneven placing can cause too much noise as well.
There is a peculiar smell in the unit	6.1 Is the food with special smell sealed tight? 6.2. Have you stored food for too long or do you have spoiled food in the appliance? 6.3. Does the internal cabinet need cleaning?
The forefront or the middle part of the cabinet heats	7.1 As the anti-condensation tube of the appliance is placed here it causes the above phenomenon, which is normal.
The sides and the back of the appliance is warm	8.1 As the anti-condensation tube of the appliance is placed here it causes the above phenomenon, which is normal.
There is condensation on the surface of the cabinet	9.1 Air humidity is too high 9.2. The ambient temperature is too low

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SOLUTION FOR THE COMMON PROBLEMS

1. Cooling is not good enough (Many reasons might cause that cooling not good enough-- see below)		
Reason	Analysis	Solution
1) Leakage of gas	<p>If some gas leaked, the unit will not work well.</p> <p>Phenomenon of failure:</p> <ul style="list-style-type: none"> a) lower pressure of liquid in the cycle system b) high temperature of copper tube because of discharging gas--hands feel very hot c) much noise--sounds like "ZZZZZ", comes from outlet of the capillary d) there is no or less ice on the evaporator 	<p>Solution:</p> <p>First, find out the point of leakage on the tube and then seal it by vacuuming it, finally recharge it with gas.</p> <p>Attention!</p> <p>If you find oil somewhere, it is possible that the leakage point is there.</p>
2) The quantity of gas is too much	<p>If too much gas was charged into the cycle system, the extra gas will occupy some space from the evaporator, so that the area of heat exchange becomes less, the unit will not work well.</p> <p>Phenomenon of failure:</p> <ul style="list-style-type: none"> a) higher pressure of liquid in the cycle system than normal b) higher temperature of condenser c) bigger electric current of the compressor d) there is less ice on evaporator, but there is ice on the absorbing tube e) when gas is too much, some gas liquid might go back into compressor--the compressor will be damaged by the liquid. 	<p>Solutions:</p> <p>First stop unit for several minutes, and then open charging tube, discharge all of gas. Change a new filter, and then recharge gas, finally sealed the system.</p>

3) There is air in the liquid cycle system	<p>The air in the system will cause lower efficiency of cooling.</p> <p>Phenomenon of failure:</p> <ul style="list-style-type: none"> a) higher pressure of liquid cycle system than normal, but the pressure is not over the limit b) higher temperature of discharging tube c) much noise 	<p>Solutions:</p> <p>First, stop the unit for several minutes then open the charging tube and discharge all of the gas. Change to a new filter then recharge the gas, finally seal the system.</p>
4) Low working efficiency of compressor	<p>Generally, when a compressor works for many years some parts of the compressor were outworn so that compressor discharge less gas out and unit does not work strongly.</p> <p>Phenomenon of failure:</p> <ul style="list-style-type: none"> a) lower pressure of discharging; check the pressure of the system with pressure meter to see if it is normal b) higher temperature of compressor surface c) cut off the discharging tube to see if you can block the gas coming out of the tube when the compressor is working 	<p>Solutions:</p> <p>Change a to new compressor</p>
5) There is thick ice on the evaporator	<p>In order to defrost the freezer you need to defrost ice regularly</p>	<p>Solutions:</p> <p>Turn off the unit open the doors for defrosting</p>
6) There is something that blocked the liquid cycle system	<p>Sometimes something blocks the filter of the liquid cycle system so the unit is not cooling.</p> <p>Phenomenon of failure:</p> <ul style="list-style-type: none"> a) lower pressure of discharging b) lower temperature of discharging 	<p>Solutions:</p> <p>Change to a new filter</p>

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2.NOT COOLING (Common reasons of failure are below):		
Reason	Analysis	Solution
1) Leakage of gas	<p>Phenomenon of failure:</p> <ul style="list-style-type: none"> a) leaking fast b) leaking slowly c) no sound of liquid flowing d) cut off the charging tube--no gas goes out 	<p>Solution:</p> <p>First, find out the point of leakage on the tube, seal it, vacuum it and in the end recharge with gas.</p> <p>Attention!</p> <p>If you find oil somewhere, it is possible that leakage point is there.</p>
2) There is something that blocked the liquid cycle system	<ul style="list-style-type: none"> a) Ice blocking <p>Sometimes because of unknown reason, water comes into liquid cycle system; the capillary will be blocked by water after unit runs for a certain period.</p> <p>Phenomenon of failure:</p> <p>At the beginning, the unit works well. After a certain period, more ice appears in the capillary until it blocks the hole of capillary completely. You can find the ice on the evaporator. The noise of liquid flow disappears. The pressure of absorbance becomes negative. The above phenomenon will appear repeatedly.</p> <p>The way to check ice blocking:</p> <p>Warm the capillary with a hot towel. After a while, the ice in the capillary melts and you can hear</p>	<p>Solution:</p> <p>First, stop the unit for several minutes. Open the charging tube then discharge all of the gas. Blow the cycle system with gas of nitrogen, recharge the gas and finally seal the system.</p>

	<p>the sound of the gas flow coming from the capillary. The pressure of absorbance becomes higher. It is ice blocking.</p>	
	<ul style="list-style-type: none"> b) there is offal that blocks the capillary <p>Phenomenon of failure:</p> <p>If the capillary is blocked by something such as offal etc., the sound of liquid flow disappears. The ice defrosts on the evaporator. The pressure of absorbance becomes negative. The temperature of the discharging tube is higher.</p> <p>Check offal blocking in the following way:</p> <ul style="list-style-type: none"> • Warm the capillary the same way as in the case of ice blocking. If you cannot see any changes then it must be offal blocking. 	

COMPRESSOR NEVER STOPS	
Reason	Solution
1) The temperature setting is not reasonable	Readjust the thermostat
2) Thermostat is broken	Replace the thermostat
3) The sealing of the door is damaged	Replace the gasket
4) Too much food in the freezer	Please put the food properly
5) Wind door is broken	Replace wind door
6) Fan motor is broken	Replace fan motor