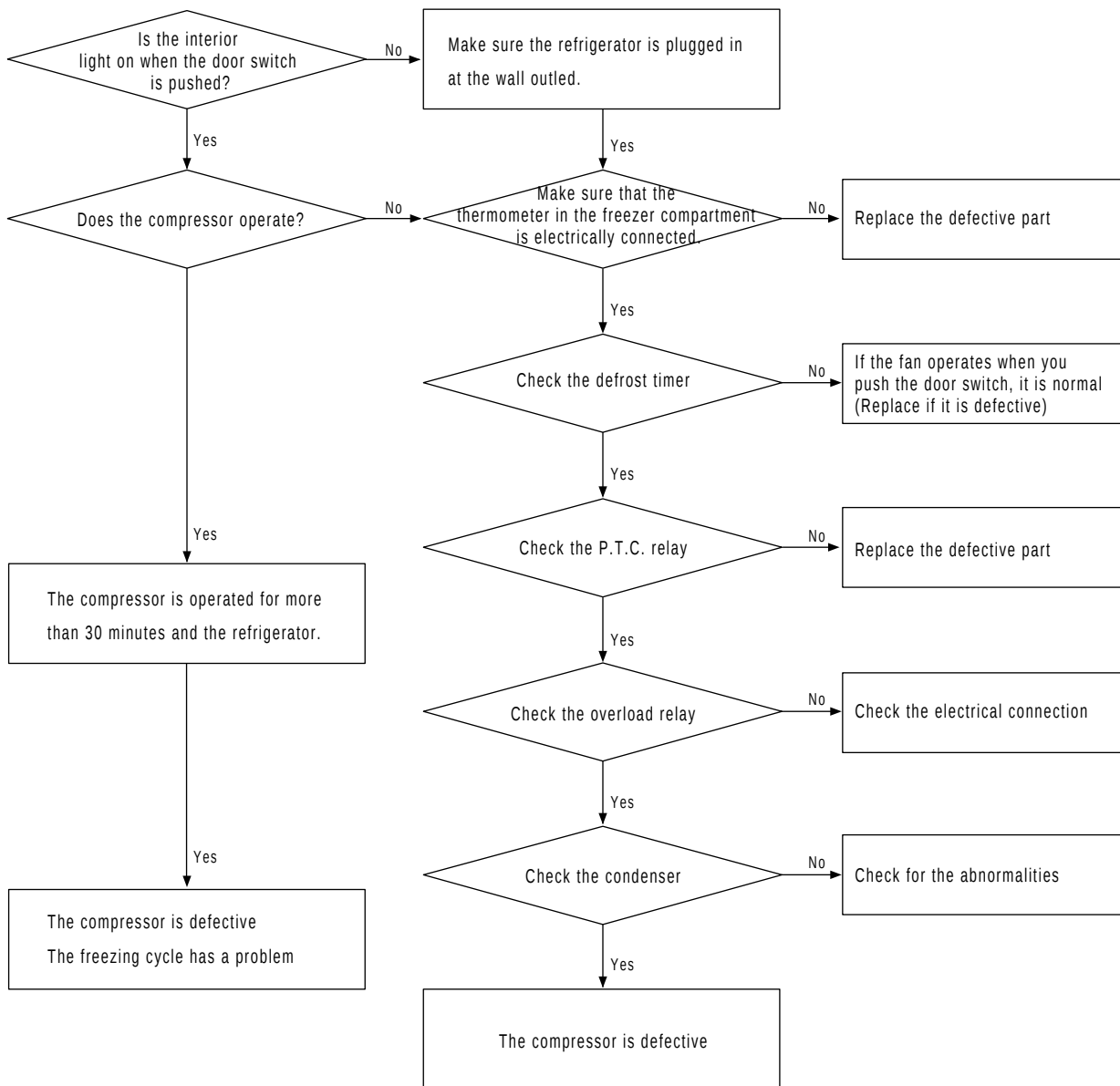
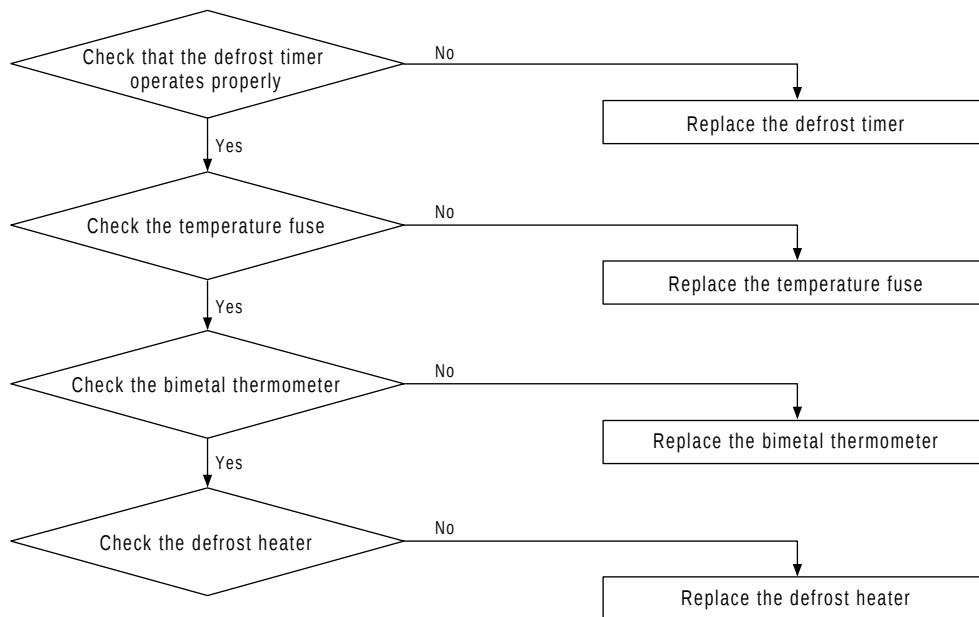


10. Troubleshooting method

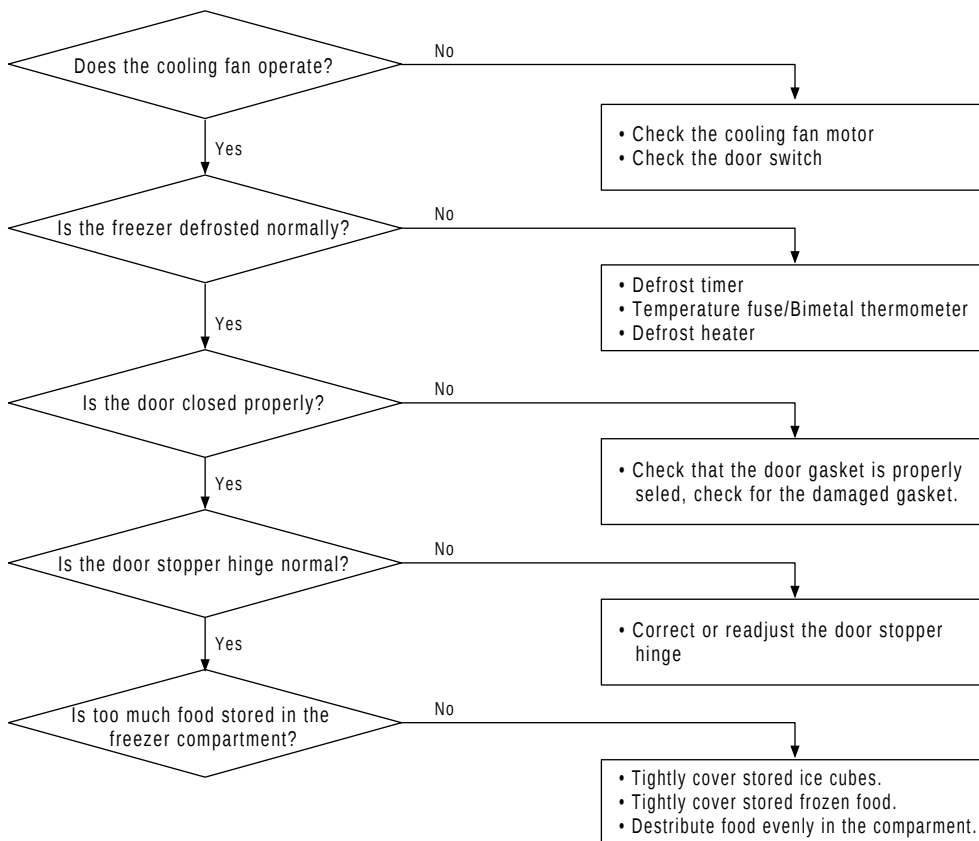
10-1 The refrigerator does not operate



10-2 Defrosting mechanism does not work



10-3 Defrosting mechanism does not work



10-4 Trouble check for the cooling cycle

Symptom	Cause	Suggestions
• The EVAP cools down and warms again. • The condenser warms in proportion as the EVAP cools. • The process continues to repeat.	Moisture in the refrigerant causes the malfunction.	Replace the refrigerant
• The condenser is cold. • The EVAP is not cold. • The temperature of the compressor is high.	Foreign substances hamper the cooling cycle.	Locate the disturbed section and make repairs
• No difference in temperatures between suction pipe and discharge pipe. • The temperature of the compressor is maintained at room temperature. • The EVAP does not cool down.	The compressor is defective	Replace the compressor
• Frost on the suction pipe. • The condenser is overheated. • The refrigeration in the EVAP is not efficient.	Too much refrigerant	Replace the refrigerant
• The condenser is cold. • The compressor surface temperature is high. • The refrigerator is not easily get cooled.	Refrigerant leaks. (Slight refrigerant leakage causes partial cooling with frost on the EVAP)	After welding the leaked spot, replace the refrigerant

10-5 Diagnosing the main components

Components	Diagnosing methods and criteria			Location									
Compressor	• Use the tester to measure the resistance. – Bring the component to cool down completely before measuring.	<table><tr><td>Measuring point</td><td>Normal</td><td>Abnormal</td></tr><tr><td>Primary iwre</td><td>Approx 10 ~ 500kW</td><td>0Wand</td></tr><tr><td>Secondary wire</td><td>3 ~ 20W</td><td>•W</td></tr></table>	Measuring point	Normal	Abnormal	Primary iwre	Approx 10 ~ 500kW	0Wand	Secondary wire	3 ~ 20W	•W		Mechanical compartment
Measuring point	Normal	Abnormal											
Primary iwre	Approx 10 ~ 500kW	0Wand											
Secondary wire	3 ~ 20W	•W											
P.T.C Relay	• Use the tester to measure the resistance. – Bring the component to cool down completely before measuring.	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>Approx •W ~ kW</td><td>0Wand •W</td></tr></table>	Normal	Abnormal	Approx •W ~ kW	0Wand •W		Mechanical compartment					
Normal	Abnormal												
Approx •W ~ kW	0Wand •W												
Condenser	• Use the tester to measure the resistance. – Bring the component to cool down completely before measuring.	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>Approx 10W~ 80kW</td><td>0Wand •W</td></tr></table>	Normal	Abnormal	Approx 10W~ 80kW	0Wand •W		Electrical equipment box					
Normal	Abnormal												
Approx 10W~ 80kW	0Wand •W												
Overload relay	• Use the tester to measure the resistance.	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>Approx 200kW</td><td>0Wand •W</td></tr></table>	Normal	Abnormal	Approx 200kW	0Wand •W		Mechanical compartment					
Normal	Abnormal												
Approx 200kW	0Wand •W												
Circuit-motor & Fan-motor	• Use the tester to measure the resistance. – Bring the component to cool down completely before measuring.	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>Approx 100W~ 20kW</td><td>0Wand •W</td></tr></table>	Normal	Abnormal	Approx 100W~ 20kW	0Wand •W		Mechanical compartment Freezing compartment					
Normal	Abnormal												
Approx 100W~ 20kW	0Wand •W												
Rotating blade geared-motor	• Use the tester to measure the resistance. – Bring the component to cool down completely before measuring.	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>Approx 10W~ 20kW</td><td>0Wand •W</td></tr></table>	Normal	Abnormal	Approx 10W~ 20kW	0Wand •W		Refrigerating compartment					
Normal	Abnormal												
Approx 10W~ 20kW	0Wand •W												
Door switch	• Use the tester to measure the resistance.	<table><tr><td>Measuring point</td><td>Normal</td><td>Abnormal</td></tr><tr><td>A B contact point</td><td rowspan="2">Approx 200MW</td><td rowspan="2">• MWand •W</td></tr><tr><td>When the switch is on by the contact</td></tr></table>	Measuring point	Normal	Abnormal	A B contact point	Approx 200MW	• MWand •W	When the switch is on by the contact		Between the upper and the lower doors		
Measuring point	Normal	Abnormal											
A B contact point	Approx 200MW	• MWand •W											
When the switch is on by the contact													
Defrost timer	• Use the tester to measure the resistance.	<table><tr><td>Measuring point</td><td>Normal</td><td>Abnormal</td></tr><tr><td>Between terminals</td><td>Approx 200KW</td><td>0Wand</td></tr><tr><td>Temperature fuse terminal</td><td>Approx 10W-300KW</td><td>•W</td></tr></table>	Measuring point	Normal	Abnormal	Between terminals	Approx 200KW	0Wand	Temperature fuse terminal	Approx 10W-300KW	•W		Electrical equipment box
Measuring point	Normal	Abnormal											
Between terminals	Approx 200KW	0Wand											
Temperature fuse terminal	Approx 10W-300KW	•W											
Defrost heater	• Use the tester to measure the resistance. – Bring the component to cool down completely before measuring.	<table><tr><td>Normal</td><td>Abnormal</td></tr><tr><td>Approx 3KW~ 6KW</td><td>• MW~ •W</td></tr></table>	Normal	Abnormal	Approx 3KW~ 6KW	• MW~ •W		Lower EVAP					
Normal	Abnormal												
Approx 3KW~ 6KW	• MW~ •W												
Bimetal Temperature fuse	• Use the tester to measure the resistance.	<table><tr><td>Measuring point</td><td>Normal</td><td>Abnormal</td></tr><tr><td>Bimetal terminal</td><td rowspan="2">Approx 200MW</td><td rowspan="2">•W ~ •W</td></tr><tr><td>Temperature fuse terminal</td></tr></table>	Measuring point	Normal	Abnormal	Bimetal terminal	Approx 200MW	•W ~ •W	Temperature fuse terminal		EVAP		
Measuring point	Normal	Abnormal											
Bimetal terminal	Approx 200MW	•W ~ •W											
Temperature fuse terminal													