



MITSUBISHI
ELECTRIC

HOME REFRIGERATORS

Changes for the Better

SERVICE MANUAL

2010

NO.SM-RE-1007

Models	MR-385B-W-A
	MR-385B-ST-A
	MR-385BL-W-A
	MR-385BL-ST-A
	MR-420B-W-A
	MR-420B-ST-A
	MR-455B-W-A
	MR-455B-ST-A

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A.....Australia and New Zealand

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SPECIFICATIONS

1.1 SPECIFICATIONS

MR-385B-A

MR-385BL-A

Power supply		230/240V 50Hz	
Total capacity (Gross (AS))	L	385 (F : 130 R : 255)	
Dimensions (HXWXD)	mm.	1587 x 687 x 694	
Cabinet		Acrylic resin coated steel	
Food liner		ABS resin	
Insulation	Cabinet	Foamed cyclopentane	
	Freezer door	Foamed cyclopentane	
	Refrigerator door	Foamed cyclopentane	
Cooling system	Freezer	Forced air convection	
	Refrigerator	Surround cooling,multi air flow,front air flow	
Evaporator		Fin and tube type	
Condenser		Concealed type	
Defrost system		Automatic (Heater defrost)	
Drain		Automatic (drainage)	
Temperature control system		Automatic control	
Refrigerator room light		240V 15W (E12)	
Accessories	Ice tray	1 pc.	
	Ice box	1 pc.	
	Freezer pocket	2 pcs.	
	Slide chilled case	1 pc.	
	Crystal shelf (F)	1 pc.	
	Glass shelf (R)	3 pcs.	
	Free pocket	1 pc.	
	Egg rack	2 pcs.	
	Adjust pocket	2 pcs.	
	Bottle pocket	2 pcs.	
	Vegetable case	1 pc.	
	Tray V	1 pc.	
	Drain pan	1 pc.	
	Bottle stopper	1 pc.	
Weight	Unit	kg	71
	Shipping	kg	77

MR-420B-A

Power supply		230/240V 50Hz	
Total capacity (Gross (AS))	L	420 (F : 130 R : 290)	
Dimensions (HXWXD)	mm.	1692 x 687 x 694	
Cabinet		Acrylic resin coated steel	
Food liner		ABS resin	
Insulation	Cabinet	Foamed cyclopentane	
	Freezer door	Foamed cyclopentane	
	Refrigerator door	Foamed cyclopentane	
Cooling system	Freezer	Forced air convection	
	Refrigerator	Surround cooling,multi air flow,front air flow	
Evaporator		Fin and tube type	
Condenser		Concealed type	
Defrost system		Automatic (Heater defrost)	
Drain		Automatic (drainage)	
Temperature control system		Automatic control	
Refrigerator room light		240V 15W (E12)	
Accessories	Ice tray	1 pc.	
	Ice box	1 pc.	
	Freezer pocket	2 pcs.	
	Slide chilled case	1 pc.	
	Crystal shelf (F)	1 pc.	
	Glass shelf (R)	3 pcs.	
	Free pocket	1 pc.	
	Egg rack	2 pcs.	
	Adjust pocket	2 pcs.	
	Bottle pocket	2 pcs.	
	Vegetable case	1 pc.	
	Tray V	1 pc.	
	Drain pan	1 pc.	
Bottle stopper	1 pc.		
Weight	Unit	kg	73
	Shipping	kg	80

MR-455B-A

Power supply		230/240V 50Hz	
Total capacity (Gross (AS))	L	454 (F : 130 R : 324)	
Dimensions (HXWXD)	mm.	1802 x 687 x 694	
Cabinet		Acrylic resin coated steel	
Food liner		ABS resin	
Insulation	Cabinet	Foamed cyclopentane	
	Freezer door	Foamed cyclopentane	
	Refrigerator door	Foamed cyclopentane	
Cooling system	Freezer	Forced air convection	
	Refrigerator	Surround cooling,multi air flow,front air flow	
Evaporator		Fin and tube type	
Condenser		Concealed type	
Defrost system		Automatic (Heater defrost)	
Drain		Automatic (drainage)	
Temperature control system		Automatic control	
Refrigerator room light		240V 15W (E12)	
Accessories	Ice tray	2 pcs.	
	Ice box	1 pc.	
	Freezer pocket	2 pcs.	
	Slide chilled case	1 pc.	
	Crystal shelf (F)	1 pc.	
	Glass shelf (R)	4 pcs.	
	Free pocket	1 pc.	
	Egg rack	2 pcs.	
	Adjust pocket	3 pcs.	
	Bottle pocket	2 pcs.	
	Vegetable case	1 pc.	
	Tray V	1 pc.	
	Drain pan	1 pc.	
Bottle stopper	1 pc.		
Weight	Unit	kg	78
	Shipping	kg	86

1.2 ELECTRICAL PARTS SPECIFICATION

MR-385B-A

MR-385BL-A

Compressor	Model		DHS66C88RAW		
	Power supply		220/240V 50Hz		
	Rated input	W	112.5/113(220/240V 50Hz)		
	Starting current	A	7.13/7.80(220/240V 50Hz)		
	Rated current	A	0.55/0.51(220/240V 50Hz)		
	Winding resistance (A.T. : 20 °C)		23.3 Ω(Main) / 19.7 Ω(Aux)		
PTC RELAY			PTH7M330MD2		
Motor protector	Model		5TM205NFBYY		
	Ambient temperature	°C	25		
	Time	Sec.	16 MAX		
	Current	A	6.0		
Running capacitor			4μF 400VAC		
Capillary tube		mm.	∅ 1.8 X ∅ 0.7 X 2350		
Dehydrant Molecular sieve		g	10		
Refrigerant HFC. 134a		g	170		
Defrosting control	Defrosting timer		Control board		
	Defrost finish	°C	Thermister 14 ± 1.5		
	Thermal fuse	°C	73		
Heater	Defrost heater		384 Ω (240V 150W)		
Deodorition			Filter		
Fan motor	Model		FBA12J12VXC		
	Type		DC brushless		
	Rate voltage		12V DC		
	Input Power	W	4.2 (at Vs 4.3V)		
	Revolution	r.p.m	2300 ±10%(at Vs 4.3V)		

Temperature control	Model		Freezer		Refrigerator (MM1-6177)	
	Dial position		ON	OFF	OPEN	SHUT
	Warmer	°C	-13.7	-19.0	-	3.5
	Normal	°C	-16.9	-22.9	MAX 5.0	-1.0 ± 1.5
	Colder	°C	-20.4	-27.5	-	-12.5

MR-420B-A

Compressor	Model		DHS66C88RAW	
	Power supply		220/240V 50Hz	
	Rated input	W	112.5/113(220/240V 50Hz)	
	Starting current	A	7.13/7.80(220/240V 50Hz)	
	Rated current	A	0.55/0.51(220/240V 50Hz)	
	Winding resistance (A.T. : 20 °C)		23.3 Ω(Main) / 19.7 Ω(Aux)	
PTC RELAY			PTH7M330MD2	
Motor protector	Model		5TM205NFBYY	
	Ambient temperature	°C	25	
	Time	Sec.	16 MAX	
	Current	A	6.0	
Running capacitor			4μF 400VAC	
Capillary tube		mm.	∅ 1.8 X ∅ 0.7 X 2350	
Dehydrant Molecular sieve		g	10	
Refrigerant HFC. 134a		g	170	
Defrosting control	Defrosting timer		Control board	
	Defrost finish	°C	Thermister 14 ± 1.5	
	Thermal fuse	°C	73	
Heater	Defrost heater		384 Ω (240V 150W)	
Deodorition			Filter	
Fan motor	Model		FBA12J12VXC	
	Type		DC brushless	
	Rate voltage		12V DC	
	Input Power	W	4.2 (at Vs 4.3V)	
	Revolution	r.p.m	2300 ±10%(at Vs 4.3V)	

Temperature control	Model		Freezer		Refrigerator (MM1-6177)	
	Dial position		ON	OFF	OPEN	SHUT
	Warmer	°C	-13.7	-19.0	-	3.5
	Normal	°C	-16.9	-22.9	MAX 5.0	-1.0 ± 1.5
	Colder	°C	-20.4	-27.5	-	-12.5

MR-455B-A

Compressor	Model		DHS66C88RAW		
	Power supply		220/240V 50Hz		
	Rated input	W	112.5/113(220/240V 50Hz)		
	Starting current	A	7.13/7.80(220/240V 50Hz)		
	Rated current	A	0.55/0.51(220/240V 50Hz)		
	Winding resistance (A.T. : 20 °C)		23.3 Ω(Main) / 19.7 Ω(Aux)		
PTC RELAY			PTH7M330MD2		
Motor protector	Model		5TM205NFBYY		
	Ambient temperature	°C	25		
	Time	Sec.	16 MAX		
	Current	A	6.0		
Running capacitor			4μF 400VAC		
Capillary tube	mm.	∅ 1.8 X ∅ 0.7 X 2350			
Dehydrant Molecular sieve	g	10			
Refrigerant HFC. 134a	g	170			
Defrosting control	Defrosting timer		Control board		
	Defrost finish	°C	Thermister 14 ± 1.5		
	Thermal fuse	°C	73		
Heater	Defrost heater		384 Ω (240V, 150W)		
Deodorition			Filter		
Fan motor	Model		FBA12J12VXC		
	Type		DC brushless		
	Rate voltage		12V DC		
	Input Power	W	4.2 (at Vs 4.3V)		
	Revolution	r.p.m	2300 ±10%(at Vs 4.3V)		

Temperature control	Model		Freezer		Refrigerator (MM1-6177)	
	Dial position		ON	OFF	OPEN	SHUT
	Warmer	°C	-13.7	-19.0	-	3.5
	Normal	°C	-16.9	-22.9	MAX 5.0	-1.0 ± 1.5
	Colder	°C	-20.4	-27.5	-	-12.5

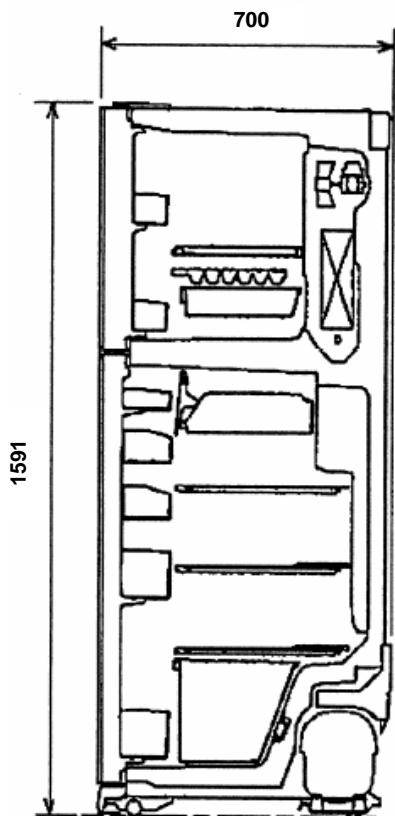
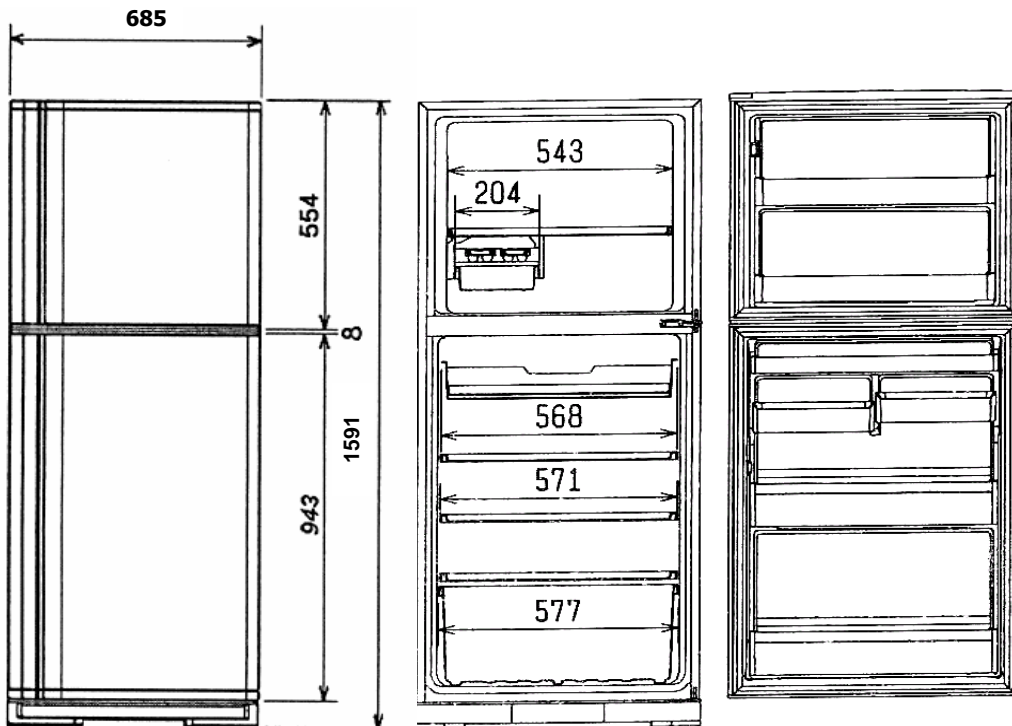
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OUTLINES AND DIMENSIONS

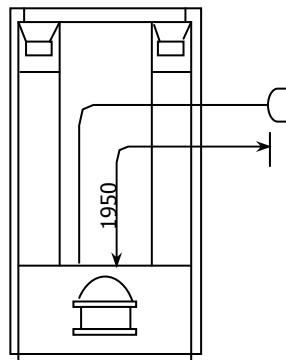
Unit : mm

MR-385B-A

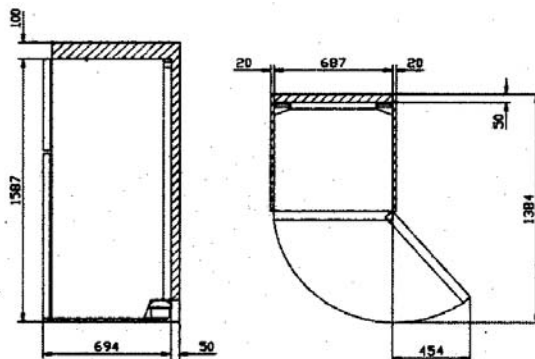
MR-385BL-A



PLUG CORD LENGTH

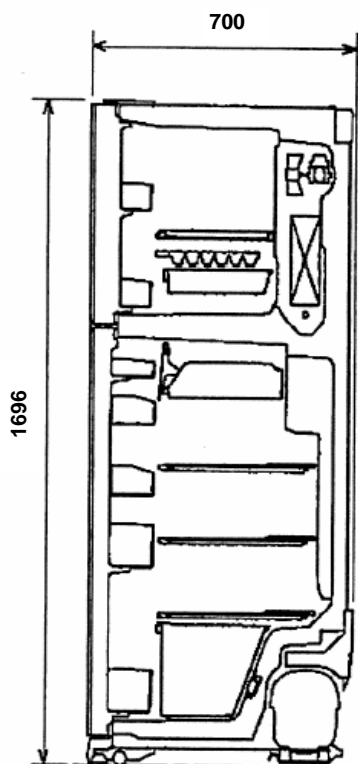
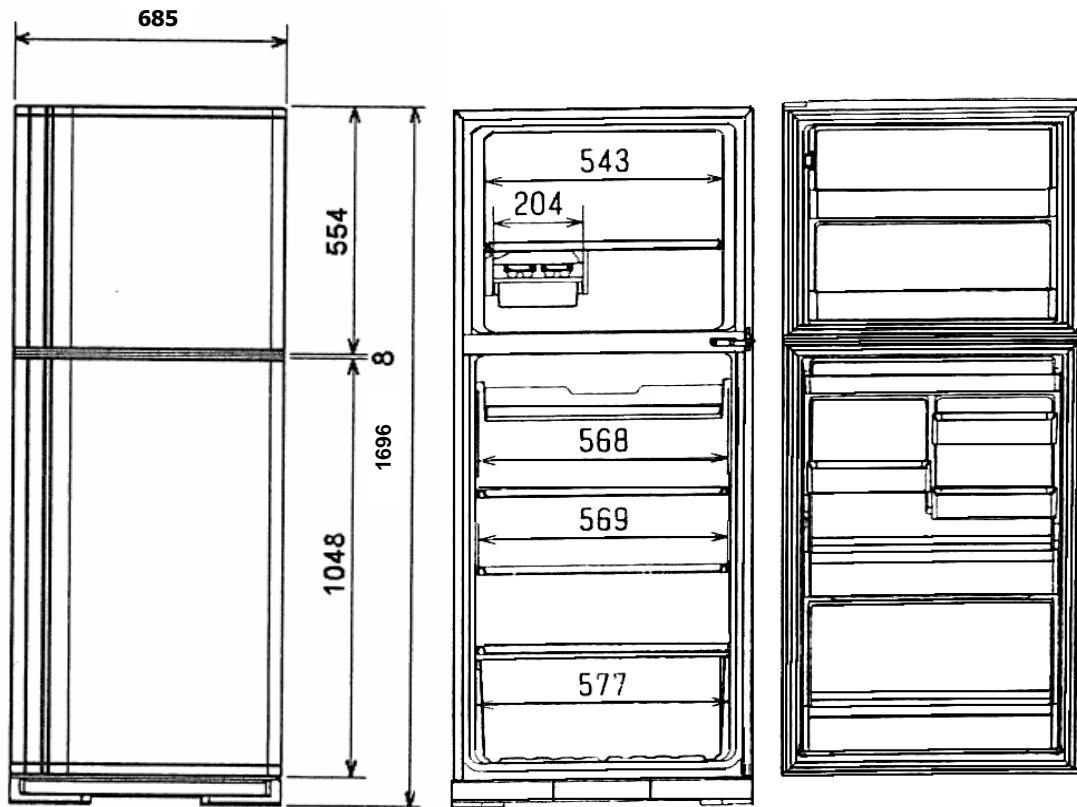


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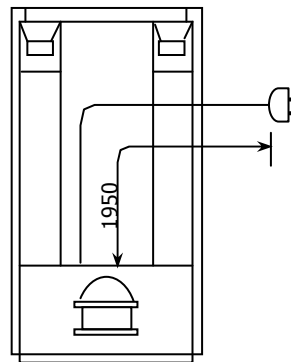


Unit : mm

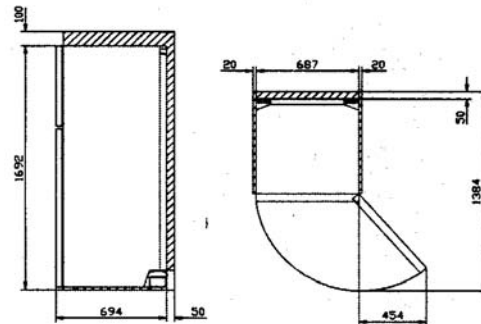
MR-420B-A



PLUG CORD LENGTH

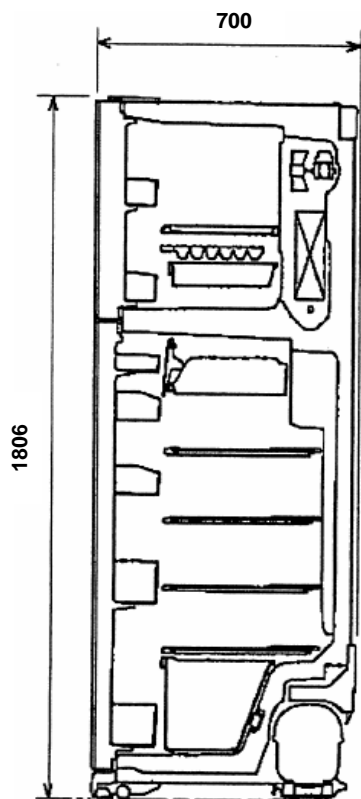
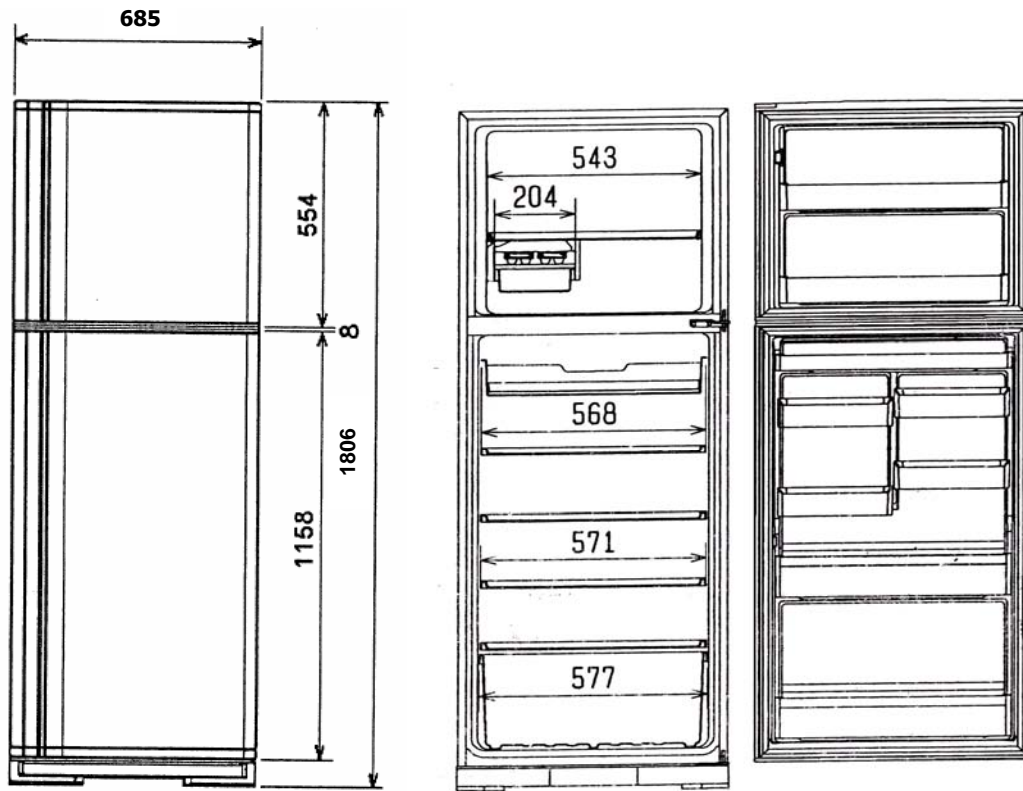


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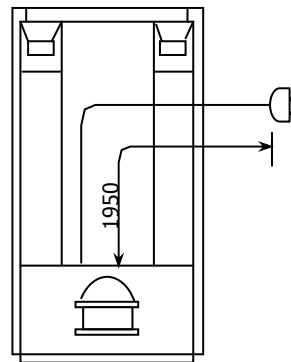


Unit : mm

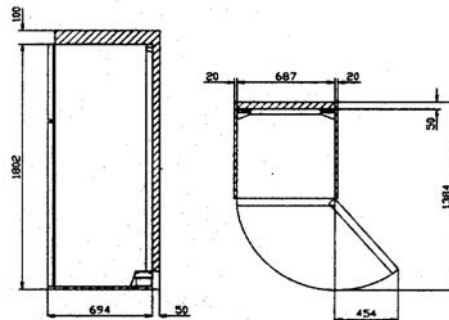
MR-455B-A



PLUG CORD LENGTH



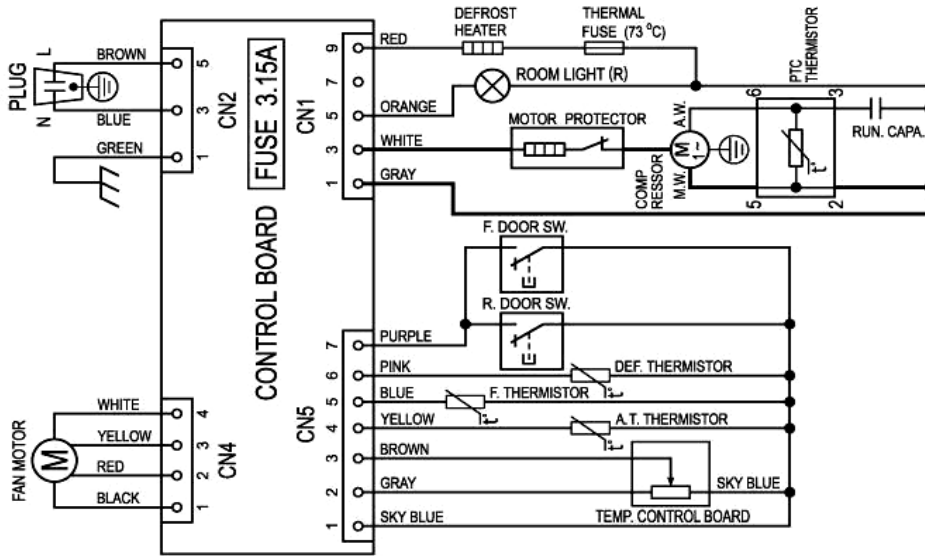
REQUIRED SPACE FOR INSTALLATION



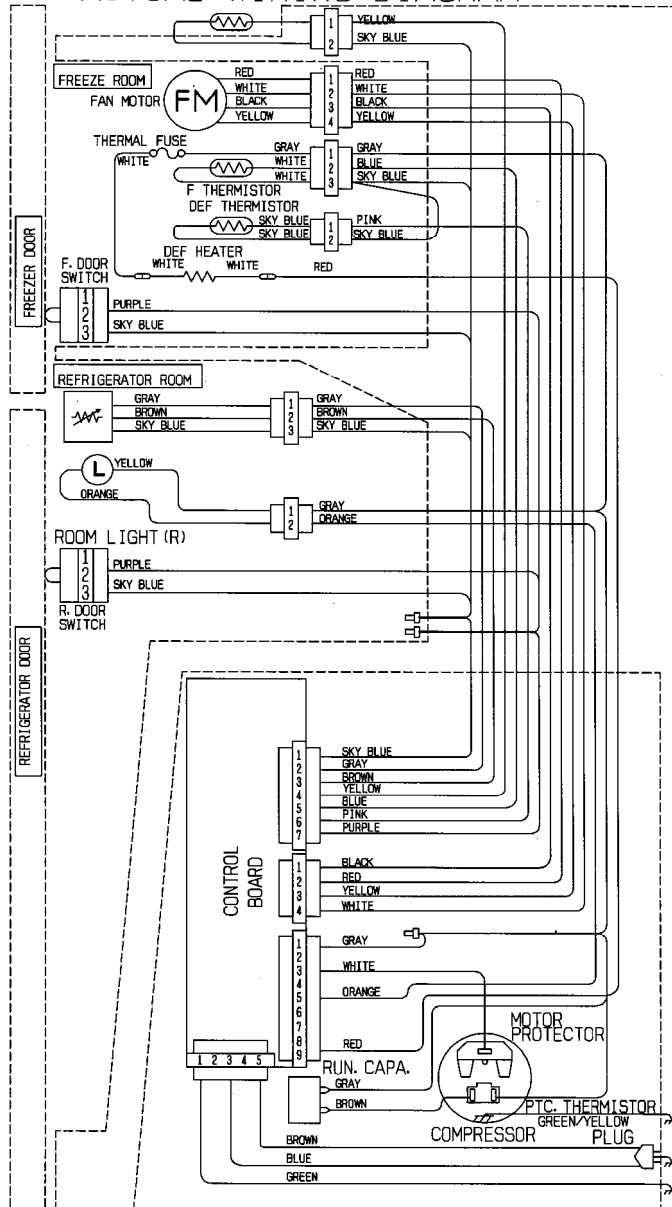
WIRING DIAGRAM

(SKELETON WIRING DIAGRAM)

- MR-385B-A
- MR-385BL-A
- MR-420B-A
- MR-455B-A



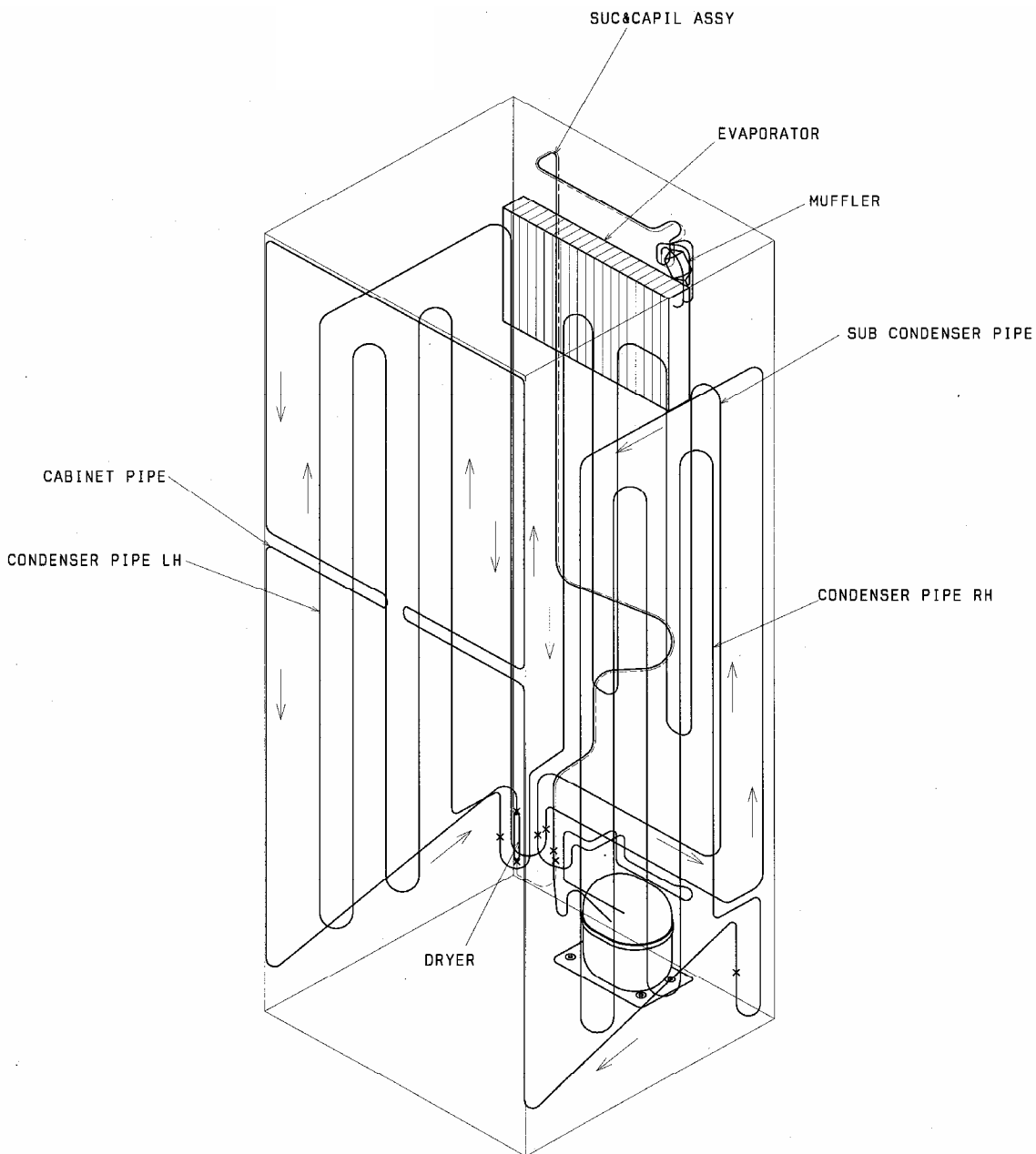
(ACTUAL WIRING DIAGRAM)



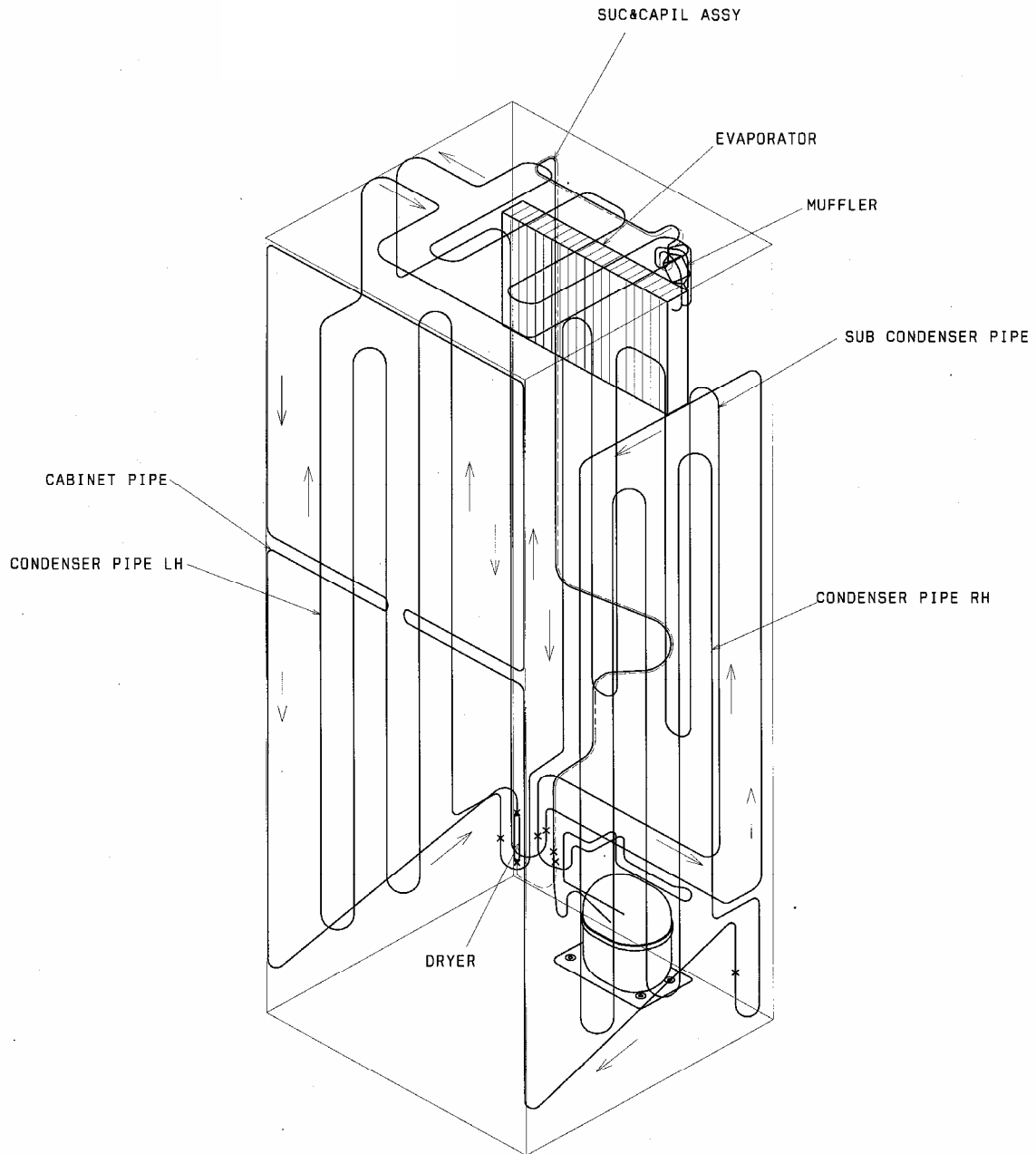
4

REFRIGERANT CIRCUIT

MR-385B-A
MR-385BL-A



MR-420B-A
MR-455B-A



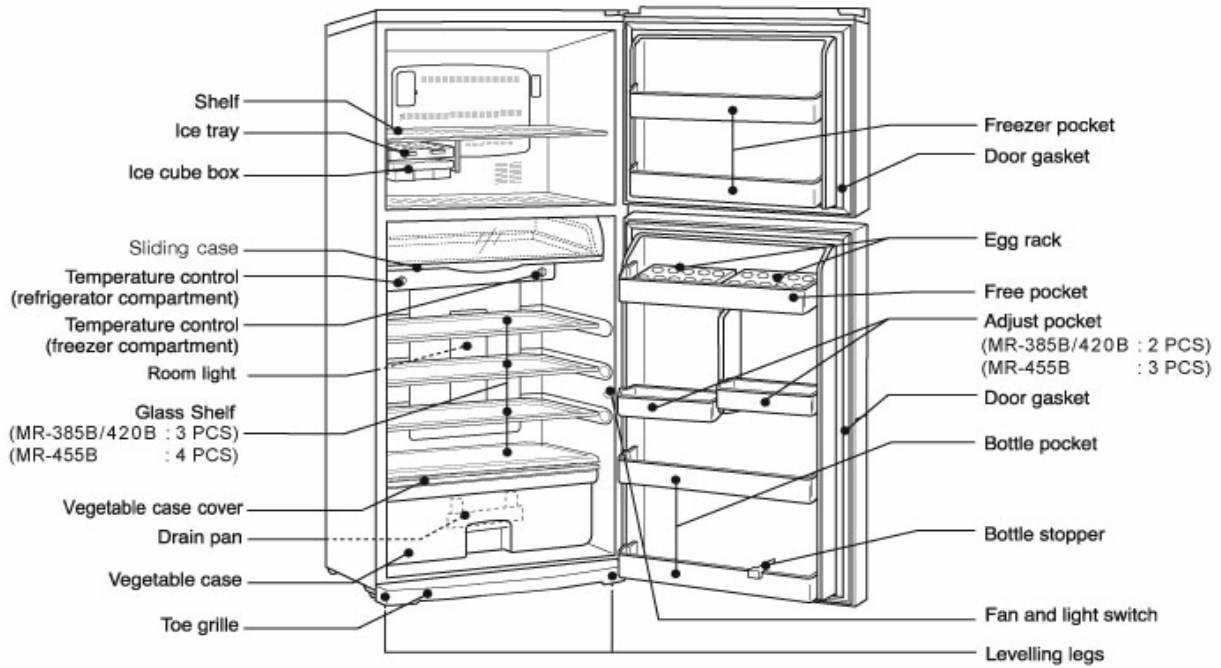
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NAMES OF PARTS

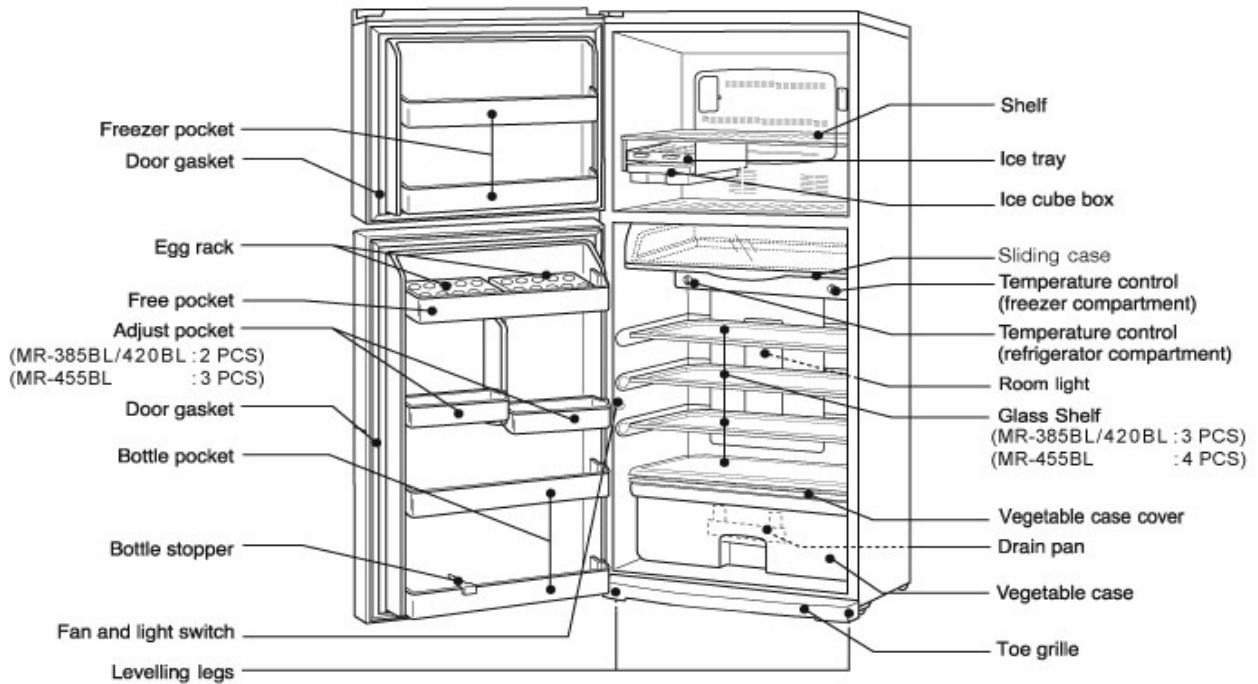
MR-385B-A

MR-420B-A

MR-455B-A



MR-385BL-A



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TROUBLE SHOOTING

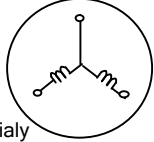
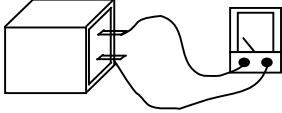
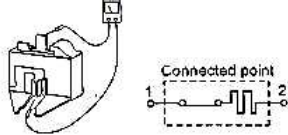
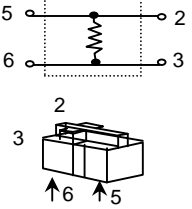
6.1 TROUBLE CRITERION OF MAIN PARTS

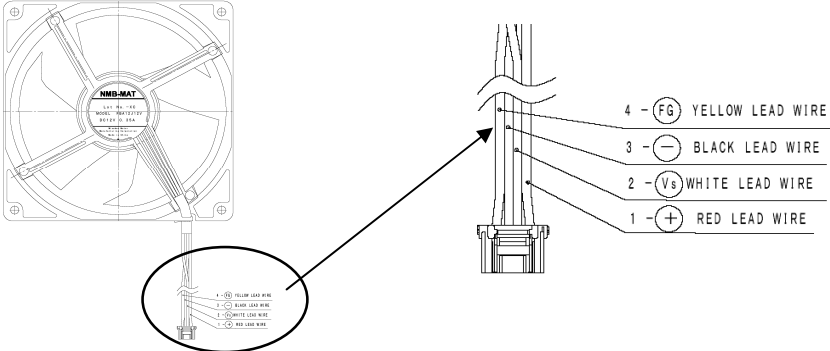
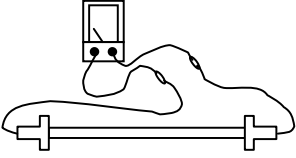
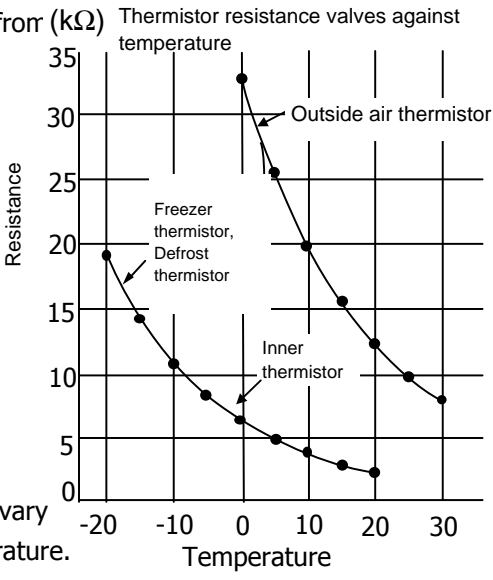
MR-385B-A

MR-385BL-A

MR-420B-A

MR-455B-A

Components/ Part Name	Check Method and Criterion	Parts Mounted Position																				
Compressor	<table border="1" data-bbox="328 479 1126 645"> <tr> <td colspan="2">Model</td> <td>DHS66C88RAW</td> </tr> <tr> <td>Rated input</td> <td>W</td> <td>112.5/113(220/240V 50Hz)</td> </tr> <tr> <td>Starting current</td> <td>A</td> <td>7.13/7.80(220/240V 50Hz)</td> </tr> <tr> <td>Rated current</td> <td>A</td> <td>0.55/0.51(220/240V 50Hz)</td> </tr> </table> <table border="1" data-bbox="555 651 1281 898"> <tr> <td></td> <td>Normal</td> <td>Abnormal (faulty)</td> </tr> <tr> <td>Main wiring</td> <td>23.3 Ω (Approx.)</td> <td rowspan="2">Opened(∞ Ω) or Short (0Ω)</td> </tr> <tr> <td>Auxiliary wiring</td> <td>19.7 Ω (Approx.)</td> </tr> </table>  <p>Auxiliary wiring Main wiring</p> <p>Measure the resistance with a tester. (Ambient temperature: Room temperature 15°C ~ 25°C)</p>	Model		DHS66C88RAW	Rated input	W	112.5/113(220/240V 50Hz)	Starting current	A	7.13/7.80(220/240V 50Hz)	Rated current	A	0.55/0.51(220/240V 50Hz)		Normal	Abnormal (faulty)	Main wiring	23.3 Ω (Approx.)	Opened(∞ Ω) or Short (0Ω)	Auxiliary wiring	19.7 Ω (Approx.)	Compressor in the machine chamber at the rear side of the frame
Model		DHS66C88RAW																				
Rated input	W	112.5/113(220/240V 50Hz)																				
Starting current	A	7.13/7.80(220/240V 50Hz)																				
Rated current	A	0.55/0.51(220/240V 50Hz)																				
	Normal	Abnormal (faulty)																				
Main wiring	23.3 Ω (Approx.)	Opened(∞ Ω) or Short (0Ω)																				
Auxiliary wiring	19.7 Ω (Approx.)																					
Run capacitor	 <table border="1" data-bbox="751 1093 1129 1144"> <tr> <td>Rated input</td> <td>400VAC</td> </tr> </table> <p>Measure the resistance with a tester.</p> <table border="1" data-bbox="751 1196 1161 1285"> <tr> <td>Normal</td> <td>Abnormal(faulty)</td> </tr> <tr> <td>Opened (∞ Ω)</td> <td>Short (0Ω)</td> </tr> </table>	Rated input	400VAC	Normal	Abnormal(faulty)	Opened (∞ Ω)	Short (0Ω)	In the control panel of the refrigerator compartment														
Rated input	400VAC																					
Normal	Abnormal(faulty)																					
Opened (∞ Ω)	Short (0Ω)																					
Motor protector	<table border="1" data-bbox="392 1357 1161 1485"> <tr> <td colspan="2">Model</td> <td>5TM205NFBYY</td> </tr> <tr> <td rowspan="2">Connected Point</td> <td>Open</td> <td>120 ± 5° C</td> </tr> <tr> <td>Close</td> <td>61 ± 9° C</td> </tr> </table> <p>Measure the resistance with a tester.(Ambient temperature: Room temperature 15°C ~ 25°C)</p>  <table border="1" data-bbox="815 1570 1185 1653"> <tr> <td>Normal</td> <td>Abnormal(faulty)</td> </tr> <tr> <td>Less than 1Ω</td> <td>Opened (∞ Ω)</td> </tr> </table>	Model		5TM205NFBYY	Connected Point	Open	120 ± 5° C	Close	61 ± 9° C	Normal	Abnormal(faulty)	Less than 1Ω	Opened (∞ Ω)	Compressor in the machine chamber at the rear side of the frame								
Model		5TM205NFBYY																				
Connected Point	Open	120 ± 5° C																				
	Close	61 ± 9° C																				
Normal	Abnormal(faulty)																					
Less than 1Ω	Opened (∞ Ω)																					
PTC RELAY	 <table border="1" data-bbox="600 1738 1249 1783"> <tr> <td>Model</td> <td>PTH7M330MD2</td> </tr> </table> <p>Measure the resistance with a tester. (Ambient temperature: Room temperature 15°C ~ 25°C)</p> <table border="1" data-bbox="600 1872 1249 1955"> <tr> <td>Normal</td> <td>Abnormal(faulty)</td> </tr> <tr> <td>33 Ω (Approx.)</td> <td>Opened (∞ Ω) or Short (0Ω)</td> </tr> </table> <p>As PTC Relay has been heated while refrigerator is running be sure to measure the resistance after the thermistor has got cool enough.</p>	Model	PTH7M330MD2	Normal	Abnormal(faulty)	33 Ω (Approx.)	Opened (∞ Ω) or Short (0Ω)	Compressor in the machine chamber at the rear side of the frame														
Model	PTH7M330MD2																					
Normal	Abnormal(faulty)																					
33 Ω (Approx.)	Opened (∞ Ω) or Short (0Ω)																					

Components/ Part Name	Check Method and Criterion	Parts Mounted Position								
Refrigerator fan motor	<table border="1" data-bbox="671 322 1142 405"> <tr> <td>Model</td> <td>FBA12J12VXC</td> </tr> <tr> <td>Type</td> <td>DC brushless</td> </tr> </table> <p data-bbox="312 416 1174 439">Measure the resistance with a tester. (Ambient temperature: Room temperature 15°C ~ 25°C)</p> <table border="1" data-bbox="561 450 1142 613"> <thead> <tr> <th>Normal</th> <th>Abnormal (faulty)</th> </tr> </thead> <tbody> <tr> <td>Between 3 - 1 (GND and IC Power) : About 25kΩ</td> <td>Between 3-1 : open (∞ Ω) or between 2-1 : short (0 Ω)</td> </tr> </tbody> </table> 	Model	FBA12J12VXC	Type	DC brushless	Normal	Abnormal (faulty)	Between 3 - 1 (GND and IC Power) : About 25kΩ	Between 3-1 : open (∞ Ω) or between 2-1 : short (0 Ω)	In fan grille of the freezer compartment.
Model	FBA12J12VXC									
Type	DC brushless									
Normal	Abnormal (faulty)									
Between 3 - 1 (GND and IC Power) : About 25kΩ	Between 3-1 : open (∞ Ω) or between 2-1 : short (0 Ω)									
Defrost Heater	 <table border="1" data-bbox="671 987 1142 1099"> <tr> <td>Rated input</td> <td>150 W</td> </tr> <tr> <td>Operation method</td> <td>Power ON after defrosting (14 ± 1.5°C or more)</td> </tr> </table> <p data-bbox="671 1111 1015 1133">Measure the resistance with a tester.</p> <p data-bbox="671 1155 1158 1178">(Ambient temperature: Room temperature 15°C ~ 25°C)</p> <table border="1" data-bbox="379 1196 1177 1308"> <thead> <tr> <th>Normal</th> <th>Abnormal (faulty)</th> </tr> </thead> <tbody> <tr> <td>384Ω (Approx.)</td> <td>Opened (∞ Ω)</td> </tr> </tbody> </table>	Rated input	150 W	Operation method	Power ON after defrosting (14 ± 1.5°C or more)	Normal	Abnormal (faulty)	384Ω (Approx.)	Opened (∞ Ω)	In the drip tray under the evaporator of the freezer compartment
Rated input	150 W									
Operation method	Power ON after defrosting (14 ± 1.5°C or more)									
Normal	Abnormal (faulty)									
384Ω (Approx.)	Opened (∞ Ω)									
Thermistor	<ul data-bbox="312 1330 727 1442" style="list-style-type: none"> Resistance measured under the ambient temperature from (kΩ) -50: to +50: <ol data-bbox="312 1487 616 1644" style="list-style-type: none"> 200" to 500k"normal Out of the above rangeabnormal  <p data-bbox="312 1809 584 1832">Thermistor Check Procedure</p> <ul data-bbox="312 1854 999 2083" style="list-style-type: none"> Thermistor resistance will vary with the change of temperature. Take the temperature around the thermistor, and then measure resistance using a tester. The relation of resistance and temperature is as shown on the above graph. 	<p data-bbox="1203 1330 1452 1487">Defrost thermistor at the muffler of evaporator in freezer compartment.</p> <p data-bbox="1203 1532 1420 1644">Freezer thermistor at fan grille of freezer compartment.</p> <p data-bbox="1203 1688 1388 1756">Out air thermistor under hinge cover</p>								

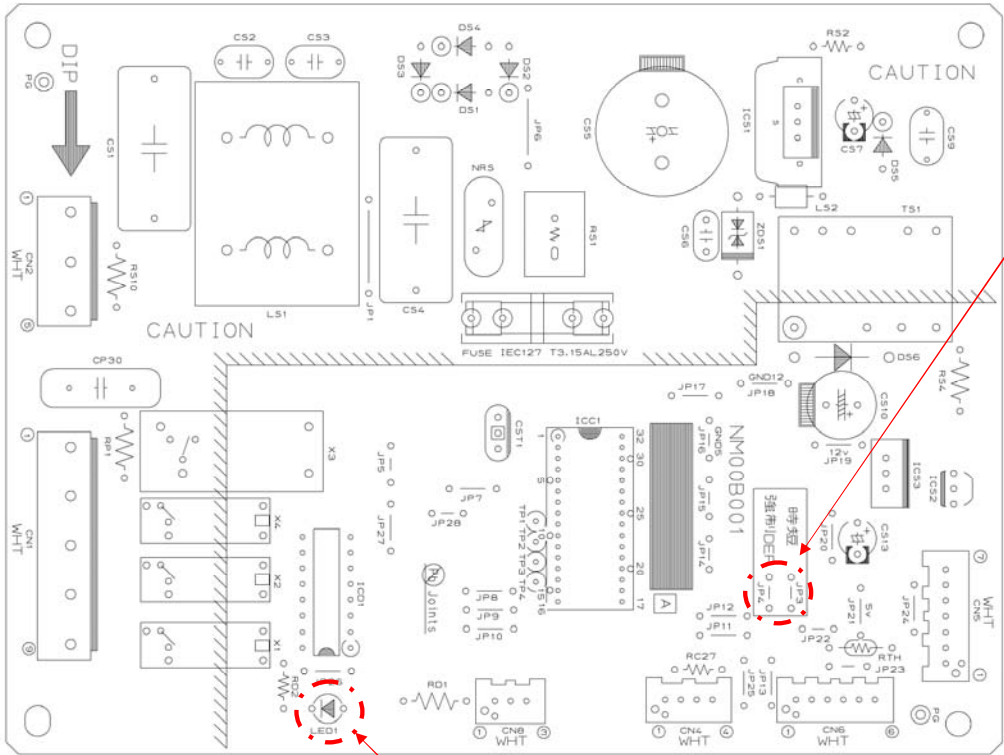
6.2 TEST POINT DIAGRAM OF MAIN CONTROL BOARD

MR-385B-A

MR-385BL-A

MR-420B-A

MR-455B-A



Compulsory defrosting

The defrosting instantaneously begins when JP3 and JP4 of the control board short-circuited. However, defrosting doesn't begin when the temperature of the thermistor is 8.6°C or over.

CN5	Lead color	Parts Name
7	PURPLE	F./R.DOOR SW.
6	PINK	DEF.THERMISTOR
5	BLUE	F.THERMISTOR
4	YELLOW	A.T.THERMISTOR
3	BROWN	TEMP.CONTROL BOARD
2	GRAY	↑
1	SKY BLUE	5V COMMON

Self-Check LED

CN1	Lead color	Parts Name
9	RED	DEFROST HEATER
7	X	X
5	ORANGE	ROOM LIGHT (R)
3	WHITE	COMPRESSOR
1	GRAY	COMMON

CN4	Lead color	Parts Name
4	WHITE	FAN MOTOR(Cont.terminal)
3	YELLOW	↑ (FG)
2	RED	↑ (VDD)
1	BLACK	↑ (GND)

6.3 LED trouble display and check point.

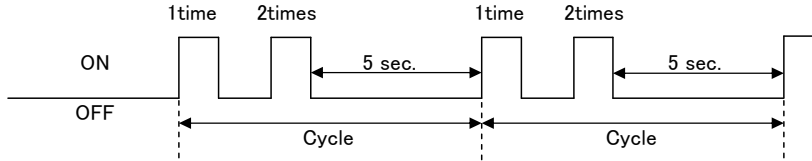
6.3.1) Trouble is indicated by the blinking number of self-check LED.

6.3.2) LED blinks as shown below.

The blinking number of self-check LED specifies the trouble which has occurred.

LED repeats to blinks as many times as the number specified for each trouble under this cycle :lighted for 0.3 second/not lighted for 0.3 second.

(Example)Malfunction of defrost thermistor



6.3.3) Check point and Repairing

※When several troubles occur,smaller blinking number LED has priority to be indicated first.

Function display		Cause	Analysis	Check point	Corrective	Priority Repairing	
LED display self-check	Malfunction display Lighting mode	1 time	Fault trouble of freezer thermistor	Open circuit or short circuit case	1.Check connector of control PCB CN5, relay connector 3 pin 2.Check the resistance of thermistor	Improve in contact Change part	1
		2 times	Fault trouble of defrost thermistor	Open circuit or short circuit case	1.Check connector of control PCB CN5, relay connector 2 pin 2.Check the resistance of thermistor	Improve in contact Change part	
		3 times	Fault trouble of defrost heater	Defrost unfinished with in 2 hours	1.Check connector of control PCB CN1, relay connector 3 pin and temp. fuse 2.Check the resistance of defrost heater 3.Check the resistance of temp. fuse	Improve in contact Change part Change part	3
		6 times	Fault trouble of A.T. thermistor	Open circuit or short circuit case	1.Check connector of control PCB CN5, relay connector 2 pin 2.Check the resistance of thermistor	Improve in contact Change part	
		10 times	Fault trouble of fan motor	Don't rolling case	1.Check connector of control PCB CN4, relay connector 4 pin 2.Check the movement of fan motor	Improve in contact Change part	5
		16 times	Fault trouble of Memory (Control Board)	Out of control case	—————	Change Control Board	

Caution

1.Before plug in the AC power, Be ensure the comp had been off more than 20 min.

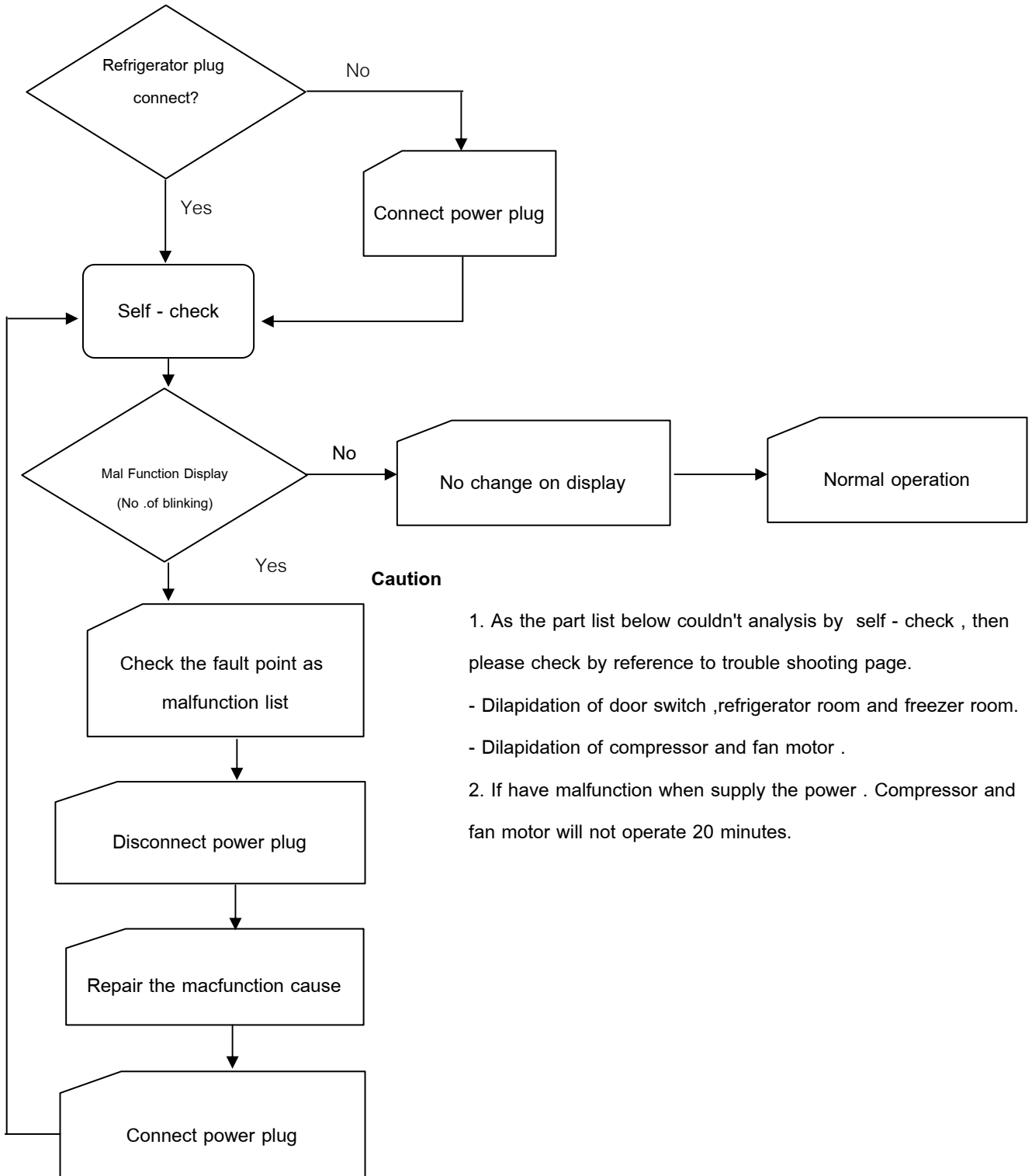
2.The consider short circuit or open circuit of thermistor, resistance of open circuit is $\infty \Omega$, resistance of short circuit is 0Ω .

6.4 Importance detail of fault analysis

Flow chart of self - check

1) Self - check monitor circuit

For show the fault condition of refrigerator and clarify point. Therefore, self - check monitor control is provided that are able to monitor No. of blinking condition with electric circuit and electric part . Before disconnect power plug please confirm LED self - check .



2) Interval of self check analysis

- Troubles of thermistor : will check always.
 - Trouble of defrost heater : will just analyse during defrost display only.
- (The period checking will analyse the defrost circuit after connect the plug 2 hours)

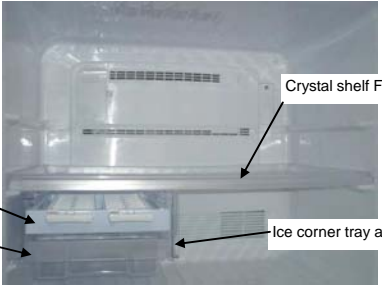
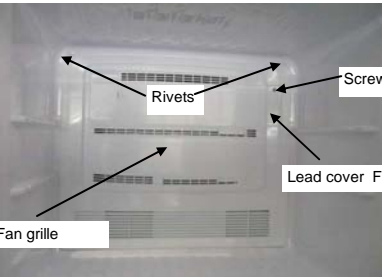
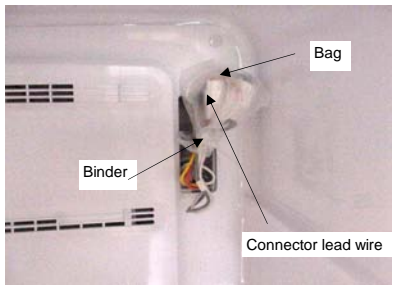
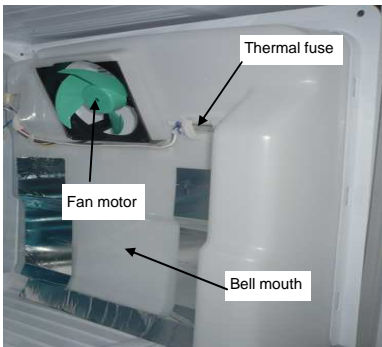
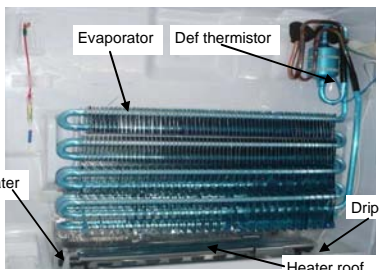
MR-385B-A

MR-385BL-A

MR-420B-A

MR-455B-A

- Unplug the power cord before repairing and servicing

OPERATING PROCEDURE	PHOTOS
<p>1. Remove parts insider the Freezer room</p> <p>(1) Photo 1st Remove Crystal shelf Freezer, Ice corner tray assy, Ice tray, Ice box</p> <p>Fan Grille</p> <p>(2) Photo 2nd Remove screws for closing Lead cover F, Remove 2 Rivets From Fan grille</p> <p>(3) Photo 3rd Cut binder, remove poly bag, Take off connector lead wire.</p> <p>Bell mouth</p> <p>(4) Unhook the catches of the fan grille and the bell mouth, and separate the fan grille and the bell mouth. (See photo 4th.)</p> <p>Fan motor</p> <p>(5) Photo 4th Remove Fan motor after separated the fan grille and the bell mouth from bell mouth</p> <p>Defrost thermal fuse and Freezer thermistor</p> <p>(6) Photo 4th remove the connector and plug to take out the thermal fuse and thermistor freezer. After separated the fan grille and the bell mouth</p> <p>Defrost heater and Drip tray</p> <p>(7) Photo 5th Lift up evaporator and remove the defrost heater out of base after remove heater cover plate and drip tray</p> <p>Caution on assembly</p> <ol style="list-style-type: none"> 1. Insert the fan into the base of fan motor's shaft, check if the fan rotates with your finger. 2. When inserted drip tray to effect to slacken the lead wire of defrost heater in order to prevent water from entering the glass tube. 3. Attach defrost thermistor with muffler and tighten the binder. 	<p>Photo 1</p>  <p>Crystal shelf F Ice tray Ice box Ice corner tray assy</p> <p>Photo 2</p>  <p>Rivets Screw Lead cover F Fan grille</p> <p>Photo 3</p>  <p>Bag Binder Connector lead wire</p> <p>Photo 4</p>  <p>Thermal fuse Fan motor Bell mouth</p> <p>Photo 5</p>  <p>Evaporator Def thermistor Drip tray Heater roof Defrost heater</p>



OPERATING PROCEDURE

PHOTOS

2. Remove parts inside the refrigerator

(1) Remove chilled case door and slide chilled case , remove glass shelves of refrigerator room , remove the control panel

(Photo 6)

(2) Remove lamp cover R

(Photo 6)

(3) Remove screw and rivet , pull the control panel with to right refrigerator wall.

(Photo 6)

(4) Remove duct R assy, damper thermo is installed within it.

(Photo 7)

Remove the screw of damper thermo

3. Remove the electric box cover

(1) Take out screw (2 points) as photo 8

(2) Take out screw (2 points)at left side and right side of electric box cover ,then pull the electric box cover as photo 9.

Caution on assembly

1. Be sure to use new sealing materials and tape for assembly.

2. Attach the sealing material of PC board and attach the aluminium tape every times for protective moisture.

3. Must put connector which contact must touch together as photo 10.

Photo 6

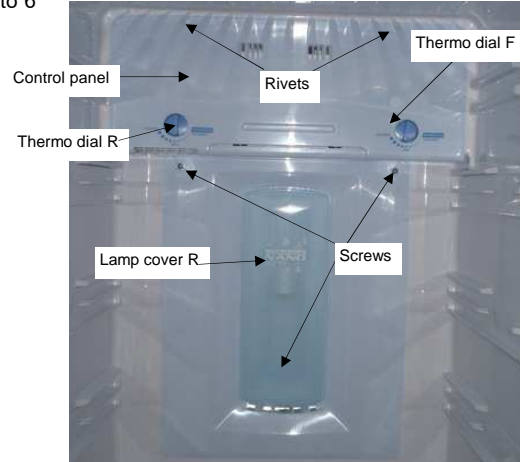


Photo 7

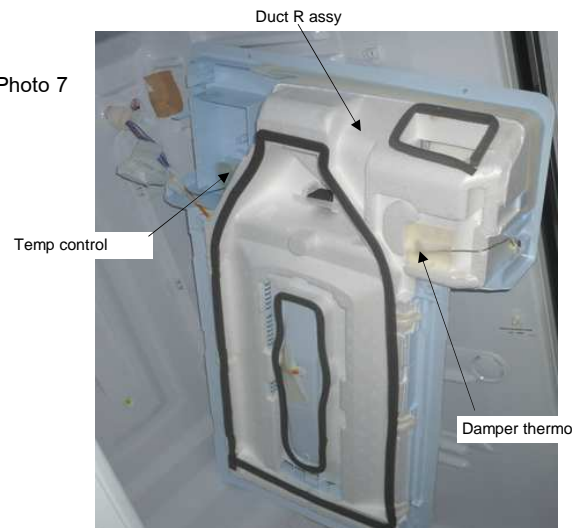


Photo 8

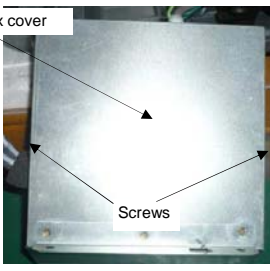
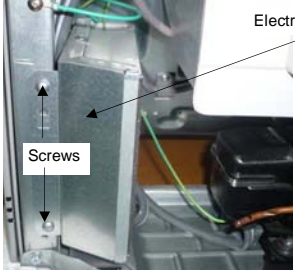


Photo 9

Photo 10

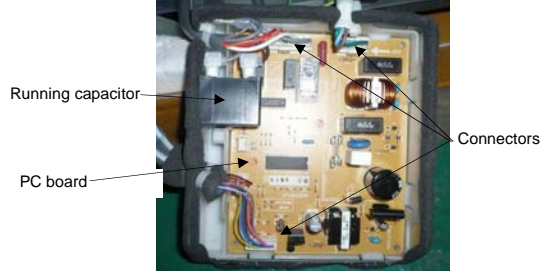


Photo 10

OPERATING PROCEDURE

4. Removing the compressor

(1) Detach the drain pan.

Compressor

(2) Collect gas from the charge pipe on the high pressure side.

(3) After collecting gas, cut the charge pipe on the low pressure side.

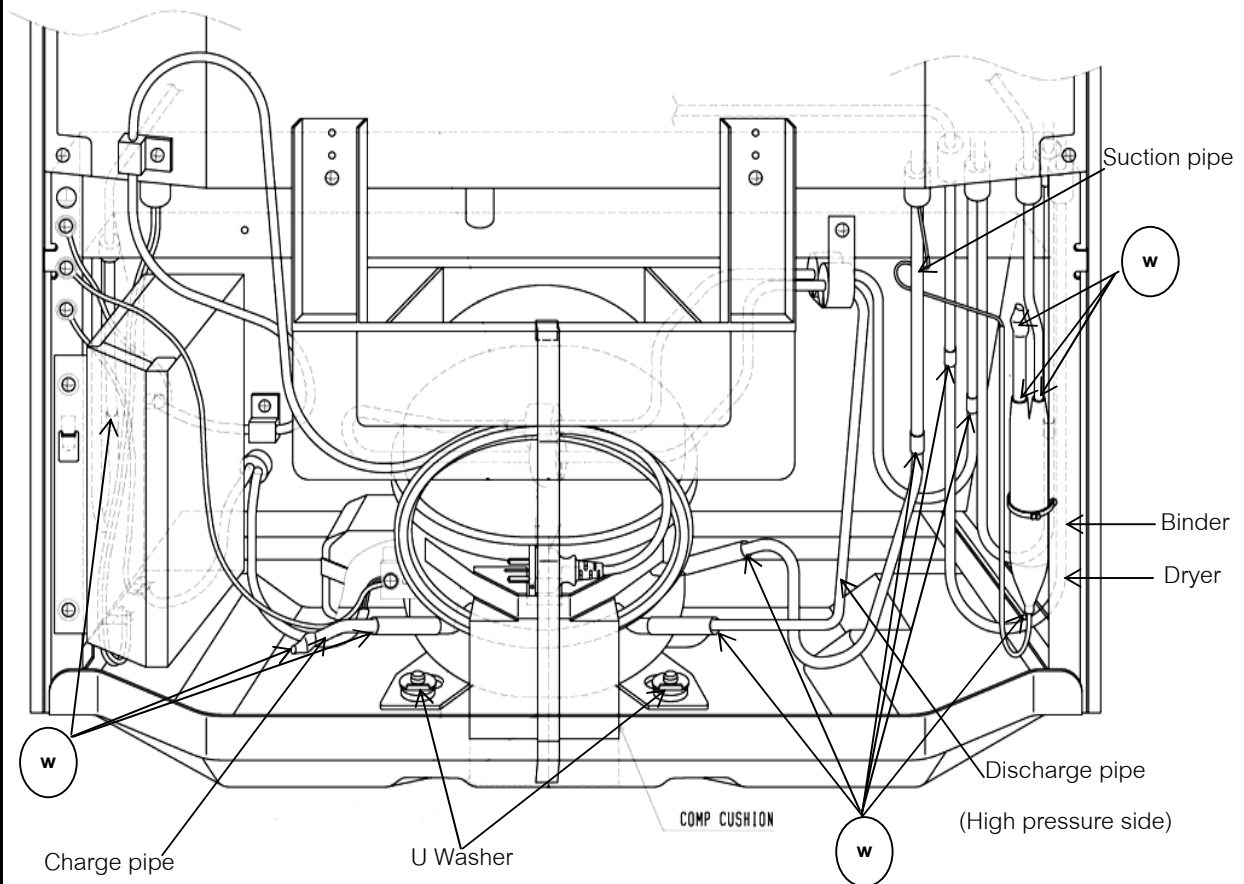
(4) Detach the welded section of the discharge pipe and suction pipe

(5) Replace the compressor and the dryer at a time. (The dryer should be the one packed with the compressor.)

CAUTION ON ASSEMBLY

After replacing the compressor be sure to evacuate the refrigerating cycle and charge gas into the charge pipe.

After replacement check cooling operation and check the weld for gas leaking.



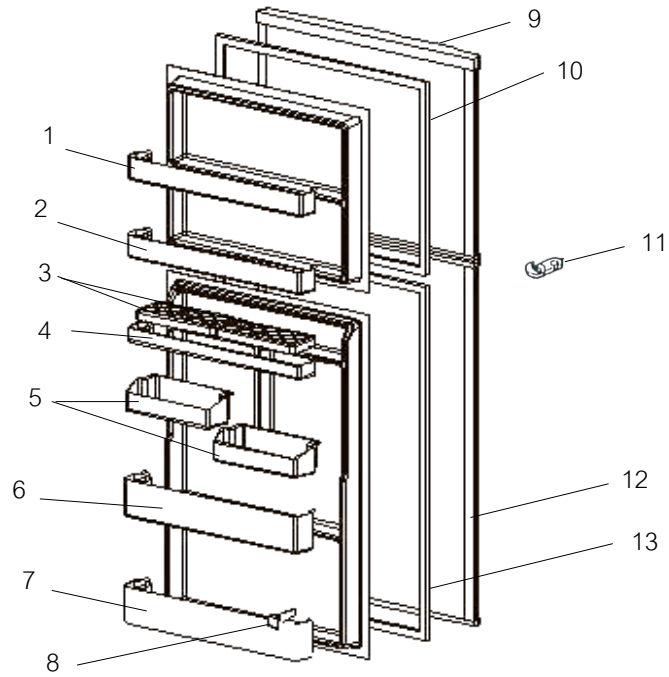
w : This mark shows welding point.

DOOR, BODY PARTS

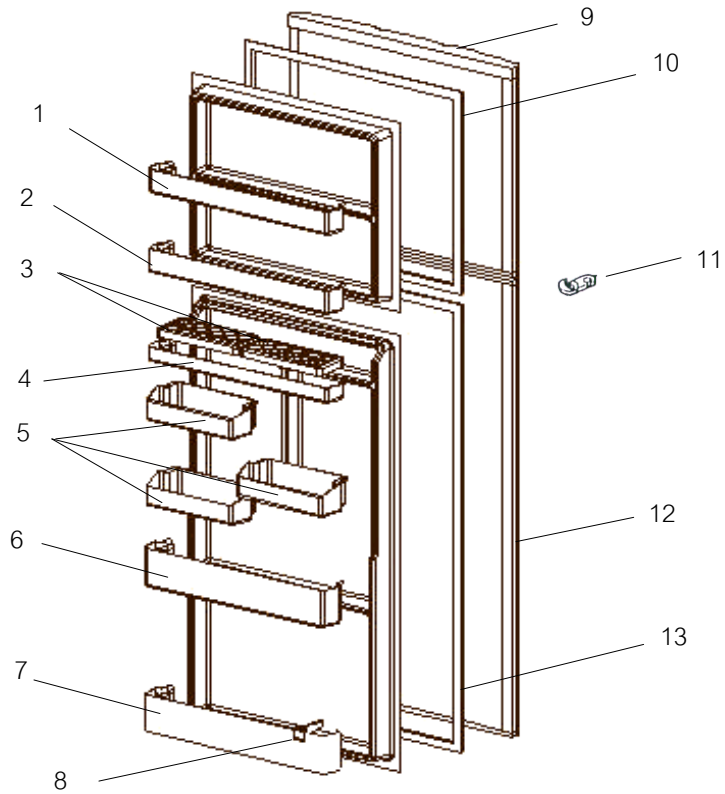
MR-385B-A

MR-385BL-A

MR-420B-A



MR-455B-A



NO.	PART NO.	RoHS	PART NAME	SPEC	Q'TY/UNIT								PRICE/PIECE(US\$-FOB)	EXPIRY
					MR-385B-A		MR-385BL-A		MR-420B-A		MR-455B-A			
					W	ST	W	ST	W	ST	W	ST		
1	KIEL75131	<G>	FREEZER POCKET PRINT		1	1	1	1	1	1	1	1		2013
2	KIEL76131	<G>	FREEZER POCKET		1	1	1	1	1	1	1	1		2013
3	KIE401115	<G>	EGG RACK		2	2	2	2	2	2	2	2		2013
4	KIEL75118	<G>	FREE POCKET		1	1	1	1	1	1	1	1		2013
5	KIEL75159	<G>	ADJUST POCKET		2	2	2	2	2	2	3	3		2013
6	KIEL75124	<G>	BOTTLE POCKET PRINT		1	1	1	1	1	1	1	1		2013
7	KIEL76124	<G>	BOTTLE POCKET		1	1	1	1	1	1	1	1		2013
8	KIEH88143	<G>	BOTTLE STOPPER		1	1	1	1	1	1	1	1		2013
9	KIEM98001	<G>	DOOR F		1				1		1			2013
	KIEM73001	<G>				1			1		1			2013
	KIEMA0001	<G>				1								2013
	KIEMA1001	<G>					1							2013
10	KIEH79111	<G>	MAGNET GASKET ASSY (F)		1	1	1	1	1	1	1	1		2015
11	KIEG05741	<G>	CATCHER RH		1	1			1	1	1	1		2015
	KIEPE4741	<G>	CATCHER LH				1	1						2015
12	KIEM98000	<G>	DOOR R		1									2013
	KIEM73000	<G>				1								2013
	KIEMA0000	<G>					1							2013
	KIEMA1000	<G>						1						2013
	KIEMA2000	<G>							1					2013
	KIEM77000	<G>								1				2013
	KIEMA4000	<G>									1			2013
	KIEM80000	<G>										1		2013
13	KIEH79110	<G>	MAGNET GASKET ASSY (R)		1	1	1	1						2015
	KIEH82110	<G>							1	1				2015
	KIEH85110	<G>									1	1		2015
14	KIEM92031	<G>	BADGE ASSY		1		1		1		1			2013
	KIEM64031	<G>				1		1		1		1		2013

RECOMMEND PART NO. 9, 10, 12, 13

ABBREVIATION

F	FREEZER ROOM
R	REFRIGERATOR ROOM

ENCIRCLED PART NUMBER ARE NOT SHOWN IN THE FIGURES.

Remark

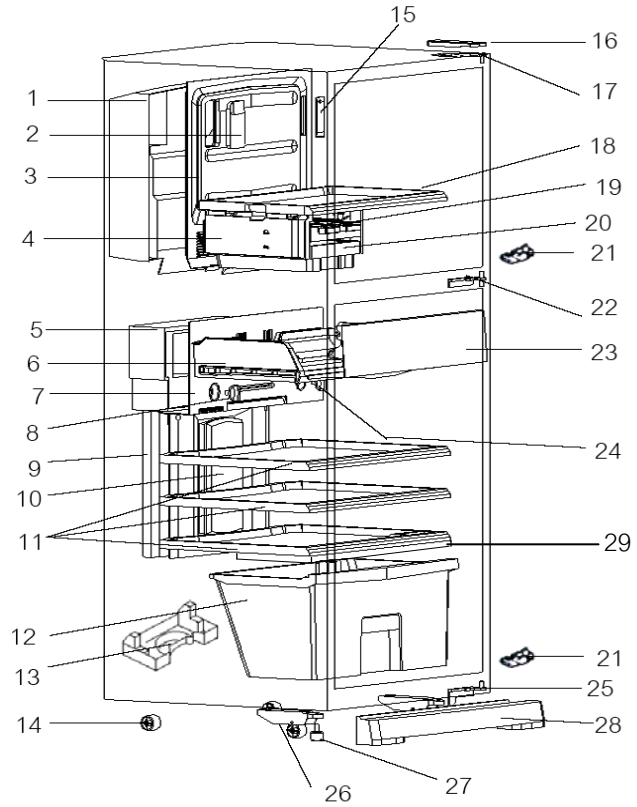
- Country code : A= Australia and New Zealand
- Colour code : W = White, ST = Stainless

ACCESSORY PARTS

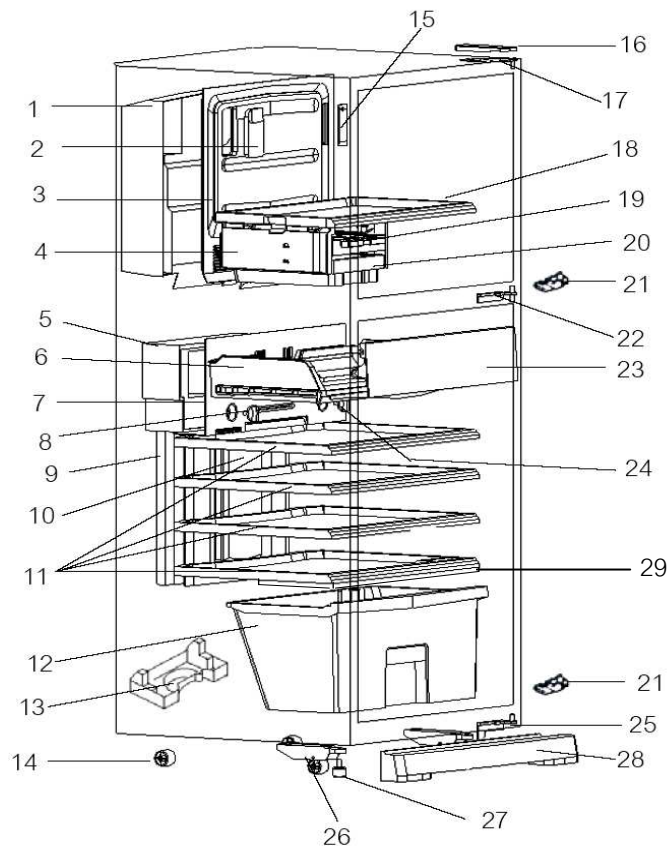
MR-385B-A

MR-385BL-A

MR-420B-A



MR-455B-A



NO.	PART NO.	RoHS	PART NAME	SPEC	Q'TY/UNIT								PRICE/PIECE (USS-FOB)	EXPIRY
					MR-385B-A		MR-385BL-A		MR-420B-A		MR-455B-A			
					W	ST	W	ST	W	ST	W	ST		
1	KIEMQ4662	<G>	BELL MOUTH		1	1	1	1	1	1	1	1		2013
2	KIEL75473	<G>	LAMP COVER (F)		1	1	1	1	1	1	1	1		2013
3	KIEH79663	<G>	FAN GRILLE		1	1	1	1	1	1	1	1		2013
4	KIEH79450	<G>	ICE CORNER ASSY		1	1	1	1	1	1	1	1		2013
5	KIEL75665	<G>	DUCT R ASSY		1	1	1	1						2013
	KIEL79665	<G>						1	1					2013
	KIEL82665	<G>								1	1			2013
6	KIEL75411	<G>	SLIDE CHILLED CASE		1	1	1	1	1	1	1	1		2013
7	KIEM98850	<G>	CONTROL PANEL		1	1	1	1	1	1	1	1		2013
8	KIEH79305	<G>	THERMO DIAL (R)		1	1	1	1	1	1				2015
	KIEHK4305	<G>								1	1			2015
9	KIEL75853	<G>	CONTROL PANEL (SUB)		1	1	1	1						2013
	KIEL79853	<G>						1	1					2013
	KIEL82853	<G>								1	1			2013
10	KIEL75470	<G>	LAMP COVER (R)		1	1	1	1						2013
	KIEL79470	<G>						1	1	1	1			2013
11	KIEK66430	<G>	GLASS SHELF (R)		3	3	3	3	3	3	4	4		2013
12	KIEL75405	<G>	VEGETABLE CASE		1	1	1	1	1	1	1	1		2013
13	KIEH79435	<G>	DRAIN PAN		1	1	1	1	1	1	1	1		2013
14	KIE805794	<G>	CASTER SET		2	2	2	2	2	2	2	2		2013
15	KIEH79326	<G>	LEAD COVER F		1	1	1	1	1	1	1	1		2013
16	KIEJ81705	<G>	HINGE COVER		1				1		1			2013
	KIEJ82705	<G>				1				1		1		2013
	KIEJ93705	<G>					1							2013
	KIEJ94705	<G>						1						2013
17	KIELR8701	<G>	HINGE ASSY (UPPER)		1	1			1	1	1	1		2013
	KIEMA1701	<G>					1	1						2013
18	KIEH79431	<G>	CRYSTAL SHELF (F)		1	1	1	1	1	1	1	1		2013
19	KIEL75440	<G>	ICE TRAY		1	1	1	1	1	1	1	1		2013
20	KIEH79467	<G>	ICE BOX		1	1	1	1	1	1	1	1		2013
21	KIEE94746	<G>	STOPPER HINGE		2	2			2	2	2	2		2015
21	KIEEA3746	<G>					2	2						2015
22	KIEMQ4703	<G>	HINGE ASSY (MIDDLE)		1	1			1	1	1	1		2013
	KIEMA0703	<G>					1	1						2013
23	KIEL75418	<G>	CHILLED CASE DOOR		1	1	1	1	1	1	1	1		2013
24	KIEH79315	<G>	THERMO DIAL (F)		1	1	1	1	1	1	1	1		2015
25	KIEL75702	<G>	HINGE ASSY (LOWER)		1	1			1	1	1	1		2013
	KIEMA0702	<G>					1	1						2013
26	KIEH79795	<G>	CASTER ASSY		2	2	2	2	2	2	2	2		2013
27	KIEC02460	<G>	ADJUST BOLT		2	2	2	2	2	2	2	2		2013
28	KIEJ81730	<G>	KICK PLATE		1				1		1			2013
	KIEJ82730	<G>				1				1		1		2013
	KIEJ93730	<G>					1							2013
	KIEJ94730	<G>						1						2013
29	KIEK88468	<G>	TRAY V		1	1	1	1	1	1	1	1		2013

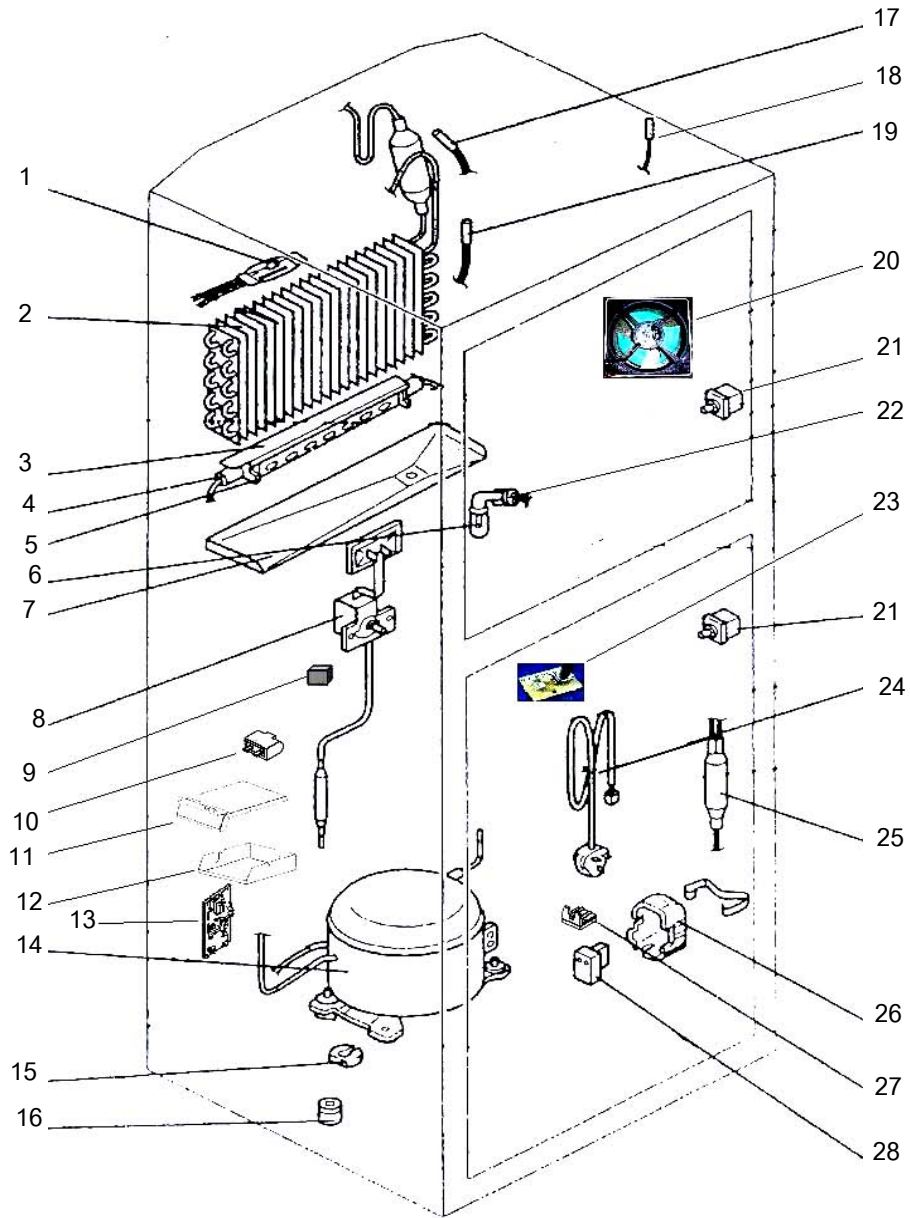
RECOMMEND PART NO. 6, 8 ,11, 12, 18, 19, 20

ABBREVIATION

F	FREEZER ROOM	V	BETWEEN REFRIGERATOR ROOM AND VEGETABLE ROOM
R	REFRIGERATOR ROOM		

ELECTRICAL PARTS AND UNIT PARTS

- MR-385B-A
- MR-385BL-A
- MR-420B-A
- MR-455B-A



NO.	PART NO.	RoHS	PART NAME	SPEC	QTY/UNIT								PRICE/PIECE (US\$-FOB)	EXPIRY
					MR-385B-A		MR-385BL-A		MR-420B-A		MR-455B-A			
					W	ST	W	ST	W	ST	W	ST		
1	KIEM98336	<G>	THERMAL FUSE (DEF)		1	1	1	1	1	1	1	1		2015
2	KIEMQ4995	<G>	EVAPORATOR		1	1	1	1	1	1	1	1		2015
3	KIEH79537	<G>	HEATER ROOF		1	1	1	1	1	1	1	1		2015
4	KIEHM2392	<G>	DEFROST HEATER ASSY	240V, 150W NOT DEODORIZER	1	1	1	1	1	1	1	1		2015
5	KIEB66397	<G>	HEATER COVER		1	1	1	1	1	1	1	1		2015
6	KIE402360	<G>	LAMP	240V 15W E12	1	1	1	1	1	1	1	1		2015
7	KIEH79538	<G>	DRIP TRAY		1	1	1	1	1	1	1	1		2015
8	KIEH79301	<G>	DAMPER THERMO	MM1-6177	1	1	1	1	1	1	1	1		2015
9	KIEH61399	<G>	FILTER		1	1	1	1	1	1	1	1		2013
10	KIELR4346	<G>	RUNNING CAPACITOR	4µF 400VAC	1	1	1	1	1	1	1	1		2015
11	KIEM98326	<G>	ELECTRIC COVER BOX		1	1	1	1	1	1	1	1		2013
12	KIEMQ4326	<G>	ELECTRIC BOX		1	1	1	1	1	1	1	1		2013
13	KIEM98339	<G>	REFCON ASSY		1	1	1	1	1	1	1	1		2015
14	KIEMQ4277	<G>	COMPRESSOR	DHS66C88RAW	1	1	1	1	1	1	1	1		2015
15	KIE902735	<G>	U WASHER		3	3	3	3	3	3	3	3		2013
16	KIEE76797	<G>	RUBBER MOUNT		4	4	4	4	4	4	4	4		2013
17	KIEMQ4312	<G>	THERMISTOR (DEF)		1	1	1	1	1	1	1	1		2015
18	KIEHJ3311	<G>	THERMITOR (A.T.)		1	1	1	1	1	1	1	1		2015
19	KIEB66378	<G>	THERMISTOR (F)		1	1	1	1	1	1	1	1		2015
20	KIEMQ4320	<G>	FAN MOTOR		1	1	1	1	1	1	1	1		2015
21	KIEMQ4363	<G>	LAMP SWITCH		2	2	2	2	2	2	2	2		2015
22	KIEMQ4386	<G>	LAMP SOCKET(R)		1	1	1	1	1	1	1	1		2015
23	KIEM98382	<G>	TEMP CONTROL BOARD		1	1	1	1	1	1	1	1		2015
24	KIEM98354	<G>	PLUG CORD ASSY		1	1	1	1	1	1	1	1		2015
25	KIEAA1980	<G>	DRYER	4AXH-9,10GR	1	1	1	1	1	1	1	1		2015
26	KIEG05341	<G>	PROTECTOR COVER		1	1	1	1	1	1	1	1		2013
27	KIEMQ4340	<G>	MOTOR PROTECTOR	5TM205NFBYY53	1	1	1	1	1	1	1	1		2015
28	KIEE76330	<G>	PTC RELAY	PTH7MM330MD2	1	1	1	1	1	1	1	1		2015

RECOMMEND PART NO. 1, 4, 6, 8, 10, 13, 17, 18, 19, 21, 25, 27, 28

ABBREVIATION

F	FREEZER ROOM	DEF	DEFROST
R	REFRIGERATOR ROOM		

PACKING PARTS

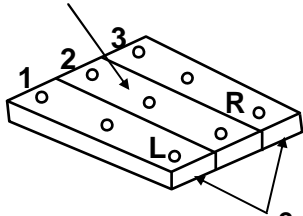
MR-385B-A

MR-385BL-A

MR-420B-A

MR-455B-A

3
TOP CUSHION MID

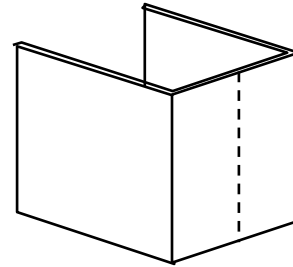
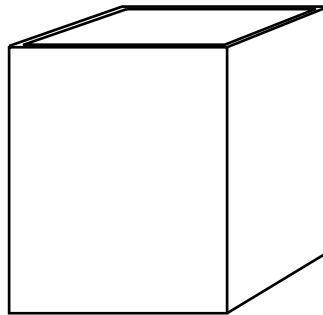


2
TOP CUSHION

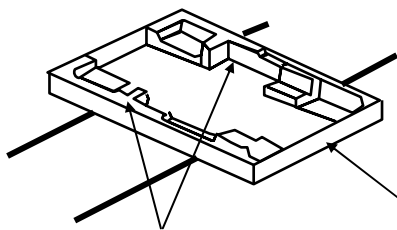


8
C.F.B TOP COVER

1
C.F.B BOX ASSY

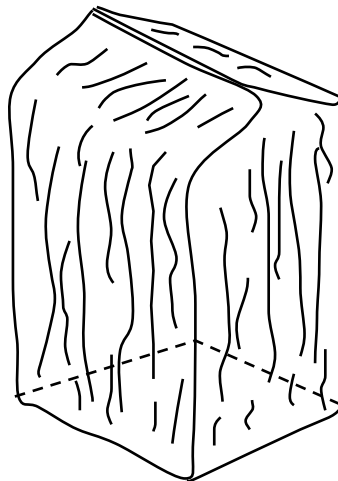


5
SIDE CUSHION ASSY



6
BOTTOM CUSHION

7
C.F.B PALLET



4
PACKING COVER

NO.	PART NO.	RoHS	PART NAME	SPEC	Q'TY/UNIT								PRICE/PIECE(US\$-FOB)	EXPIRY
					MR-385B-A		MR-385BL-A		MR-420B-A		MR-455B-A			
					W	ST	W	ST	W	ST	W	ST		
1	KIEPC8970	<G>	C.F.B BOX ASSY		1									2011
	KIEPC9970	<G>				1								2011
	KIEPD0970	<G>					1							2011
	KIEPD1970	<G>						1						2011
	KIEPD4970	<G>							1					2011
	KIEPD5970	<G>								1				2011
	KIEPD6970	<G>									1			2011
	KIEPD7970	<G>										1		2011
2	KIEL75979	<G>	TOP CUSHION		1	1	1	1	1	1	1	1	1	2011
3	KIEH79972	<G>	TOP CUSHION MID		1	1	1	1	1	1	1	1	1	2011
4	KIEG55973	<G>	PACKING COVER		1	1	1	1	1	1	1	1	1	2011
5	KIEJ81971	<G>	SIDE CUSHION ASSY		1	1	1	1	1	1	1	1	1	2011
6	KIEH79978	<G>	BOTTOM CUSHION		1	1	1	1	1	1	1	1	1	2011
7	KIEH79974	<G>	C.F.B PALLET		1	1	1	1	1	1	1	1	1	2011
8	KIEH79975	<G>	C.F.B TOP COVER		1	1	1	1	1	1	1	1	1	2011



MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : MITSUBISHI DENKI BLDG., MARUNOUCHI, TOKYO 100. TELEX : J24532 CABLE MELCO TOKYO

Distributed by

MITSUBISHI ELECTRIC AUSTRALIA PTY LTD.

(Incorporated in New South Wales) ABN 58 001 215 792

New South Wales :
348 Victoria Road,
Rydalmere NSW 2116
Ph : (02) 9684 7777
Fax : (02) 9898 1043

Queensland:
Unit 12, 469
Nudgee Road,
Hendra QLD , 4011
Ph : (07) 3263 2000
Fax : (07) 3630 1888

South Australia /
Northern territory :
77 Port Road
Hindmarsh SA 5007
Ph: (08) 8340 2000
Fax : (08) 8340 0555

Western Australia :
329 Collier Road,
Bassendean WA 6054
Ph : (08) 9377 3400
Fax : (08) 9377 3499

Victoria / Tasmania :
Building 28, Omnico bus. Park
270 Ferntree Gully Road,
Notting Hill 3168
Ph : (03) 9535 7800
Fax : (03) 9535 7801

Far North
Queensland:
Capricorn Air,
13 Mackley St,
Garbutt 4814
Ph: (07) 4775 5222
Fax : (07) 4775 5303

Distributed by

BLACK DIAMOND TECHNOLOGIES LIMITED (BDT)

Wellington Office (Head Office)
1 Parliament Street
PO Box 30-772
Lower Hutt
Ph : (04) 560 9100
Fax : (04) 560 9133

Auckland Office
Unit1, 4 Walls Road
Penrose
Auckland PO Box 12-726
Ph: (09) 526 9340
Fax : (09) 526 9369

Christchurch Office
Suite 2, Level 1
37 Manderville Street
Christchurch PO Box 1604
Ph : (03) 341 7052
Fax : (03) 341 7054