

## INDOOR UNIT

AM017/022HN1DEH/EU  
 AM022/028/036FN1DEH/EU  
 AM071JN1DEH/EU, AM056/071FN2DEH/EU  
 AM045/056/071/090/112/128/140/FN4DEH/EU  
 AM045/056/071/090/112/128/140/FN4DEH/AR  
 AM045/056/071/090/112/128/140KN4DEH/EU  
 AM022/028/036/045/056/060FNNDEH/EU  
 AM015HNNDEH/EU  
 AM112/128/140/220/280FNHDEH/EU  
 AM036/056/071FNFDEH/EU  
 AM050/100FNKDEH/EU  
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 AM056/071FNCDEH/TS  
 AM112/140JNC DKH/TS  
 AM028/036/045HNNDEH/TL

# SERVICE Manual

## SYSTEM AIRCONDITIONER



## CONTENTS

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2. Product Specifications
3. Disassembly and Reassembly
4. Troubleshooting
5. PCB Diagram and Parts List
6. Wiring Diagram
7. Reference Sheet

## Indoor Unit (cont.)

### ■ Slim Home Duct

Model			AM017KNLDEH/EU	AM022KNLDEH*	AM028KNLDEH*	AM036KNLDEH*	
Power Supply		ø, #, V, Hz	1,220~240,50	1,220~240,50	1,220~240,50	1,220~240,50	
Mode		-	HP	HP	HP	HP	
Performance	Capacity (Nominal)	Cooling 2)	kW	1.7	2.2	2.8	3.6
			Btu/h	4,600	7,500	9,500	12,200
		Heating 2)	kW	1.9	2.5	3.2	4.0
			Btu/h	5,200	8,500	10,900	13,600
	Condensate (with high fan speed)		Liter/h				
Power	Input	W	28	30	34	40	
	Running Current	A	0.23	0.25	0.28	0.33	
Sound Level	Sound Pressure *4)	dB(A)	31	32	34	36	
Fan	Type	-	Sirocco Fan	Sirocco Fan	Sirocco Fan	Sirocco Fan	
	Motor	Model	-	DB31-00670A	DB31-00670A	DB31-00670A	DB31-00670A
		Type	-	BLDC Feedback	BLDC Feedback	BLDC Feedback	BLDC Feedback
		Output	W	69	69	69	69
Airflow Rate	Cooling (High)	m3/min	4.8	5.4	6.4	7.3	
	Heating (High)	m3/min	6.75	7.35	8.5	9.75	
Refrigerant	Type	-	R410A	R410A	R410A	R410A	
	Control Method	-	EDM EEV 2.4C Sanhua	EDM EEV 2.4C Sanhua	EDM EEV 2.4C Sanhua	EDM EEV 2.4C Sanhua	
Temperature Control		-	Micom&Thermistors	Micom&Thermistors	Micom&Thermistors	Micom&Thermistors	
Safety Devices		-	Fuse:3.15A/1.6A	Fuse:3.15A/1.6A	Fuse:3.15A/1.6A	Fuse:3.15A/1.6A	
Piping Connections	Liquid (Flare)	ø, mm	6.35	6.35	6.35	6.35	
	Gas (Flare)	ø, mm	12.7	12.7	12.7	12.7	
	Drain	ø, mm	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)	VP25 (OD 32,ID 25)	
Weight	Net Weight	kg	15.3	15.3	15.3	15.7	
	Shipping Weight	kg	18.2	18.2	18.2	18.6	
Dimensions	Net Dimensions (W x H x D)	mm	700*199*440	700*199*440	700*199*440	700*199*440	
	Shipping Dimensions (W x H x D)	mm	949*280*544	949*280*544	949*280*544	949*280*544	
Functions	Auto Restart	-	O	O	O	O	
	Auto Swing	-	X	X	X	X	
	Group/Individual Control	-	O	O	O	O	
	External Contact Control	-	O	O	O	O	
	Trouble Shooting by LED	-	X	X	X	X	
Standard Accessories	Installation Manual	-	O	O	O	O	
	Operation Manual	-	O	O	O	O	
	Pattern Sheet for Installation	-	X	X	X	X	
	Flexible Drain Hose	-	O	O	O	O	
	Filter / Safety Grille	-	Filter(Washable)	Filter(Washable)	Filter(Washable)	Filter(Washable)	
Optional Accessories	Wireless Remote Controller	-	MR-DH00	MR-DH00	MR-DH00	MR-DH00	
	Duct Receiver Kits	Receiver	-	MRK-A10	MRK-A10	MRK-A10	MRK-A10
		Receiver Wire	-	MRW-10A	MRW-10A	MRW-10A	MRW-10A
	Wired Remote Controller	Simplified	-	MWR-WE10N	MWR-WE10N	MWR-WE10N	MWR-WE10N
	External Contact Interface Module	-	MIM-B14	MIM-B14	MIM-B14	MIM-B14	



\*1) Mode

- HP : Heat Pump, HR : Heat Recovery

\*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

\*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB



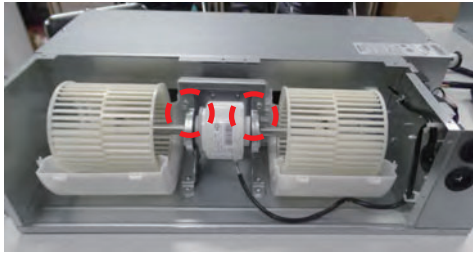
- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m



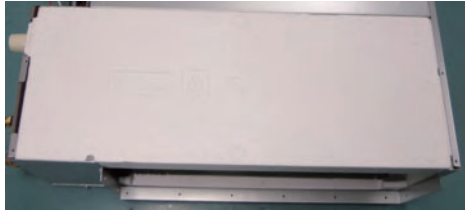
\*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.



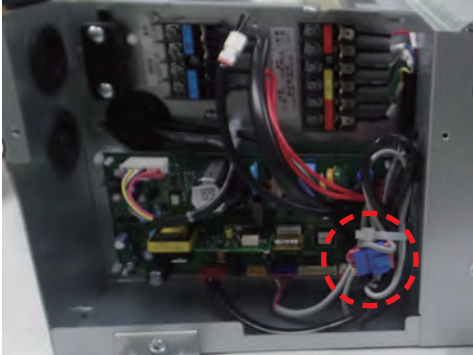
\*5) Specifications may be subject to change without prior notice for product improvement.

■ Slim Home Duct

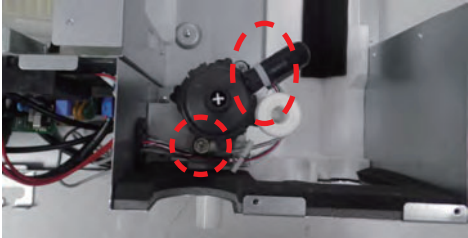
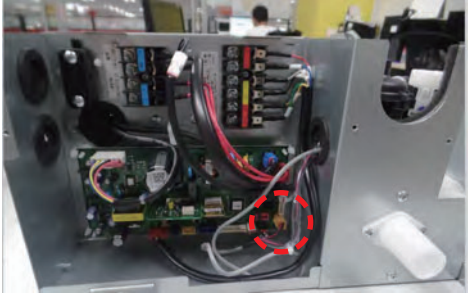

- AM017/022/028/036KNLDEH\*

No	Parts	Procedure	Remark
1	Motor & Blower	<p>1) Disassemble the Cabinet Top Motor. - Unscrew 6 screws</p> <p>2) Disassemble the Cover Blower Upper with pushing its hook.</p> <p>3) Disassemble the Cover Control. - Unscrew 2 screws</p> <p>4) Disassemble Motor Wires connected to the inside of PCB.</p> <p>5) Disassemble the band Motor for fixing the Motor. - Unscrew 2 screws</p>	    

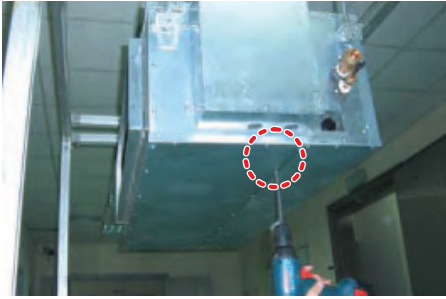


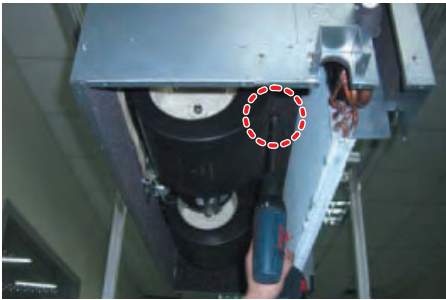
No	Parts	Procedure	Remark
		<p>6) After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.</p>	
2	Drain Pan	<p>1) Disassemble the Cabinet Top Evap. - Unscrew 4 screws.</p> <p>2) Disassemble the Drain Cushion from the set.</p>	 

No	Parts	Procedure	Remark
3	Evaporator	<p>1) Disassemble the Cover Pipe that fixes the high/ low pressure Pipe.                      - Unscrew 2 screws</p> <p>2) Disassemble the Support Evap RH.                      - Unscrew 4 screws</p> <p>3) Disassemble the refrigerant temperature sensor, Inlet air temperature sensor, and EEV wire that connected to the inside of PCB.</p> <p>4) Disassemble the Evaporator form the set.</p>	  



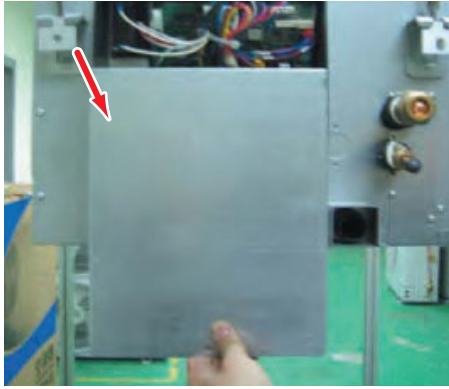
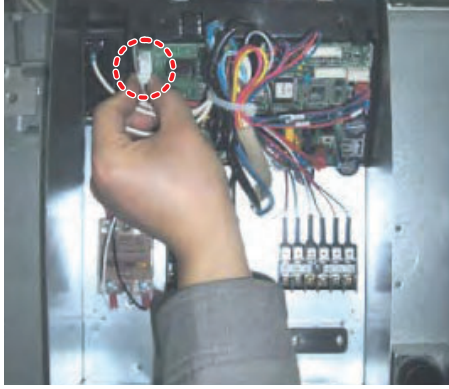
No	Parts	Procedure	Remark
4	Control In	<p>1) Disassemble the control. - Unscrew 4 screws</p> <p>2) Disassemble the control box form the set.</p>	

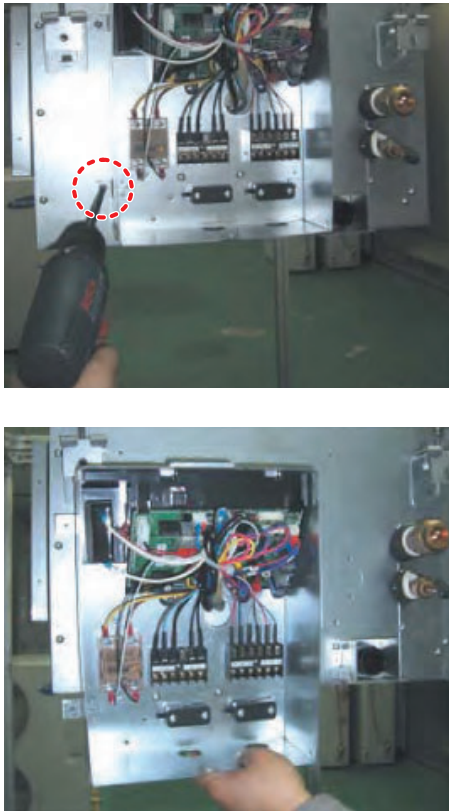
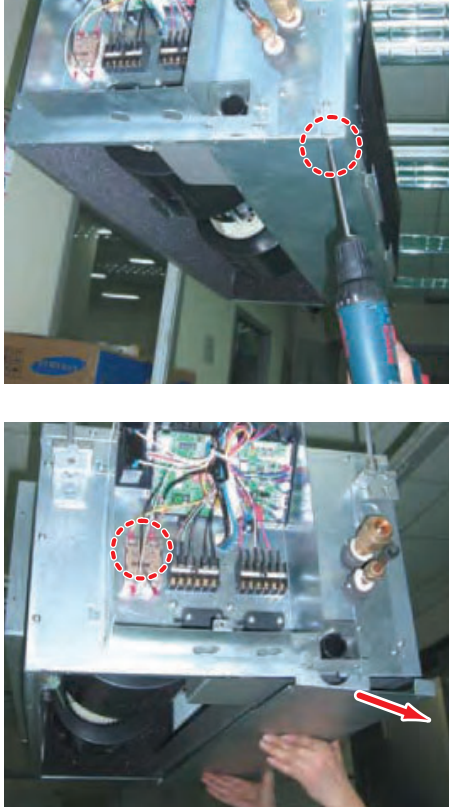
No	Parts	Procedure	Remark
5	Drain Pump &Flow-switch	<p>1) Disassemble the Drain Pump.                      - Unscrew 2 screws                      - Cut 2 tie</p> <p>2) Disassemble the Drain Pump and Flow-switch wire that connected to the inside of PCB.</p> <p>3) Disassemble Drain Pump &amp;Flow-switch from the set.</p>	  

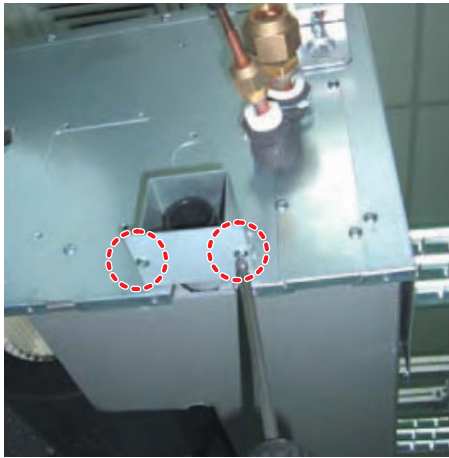



■ Duct type(Mid pressure1)



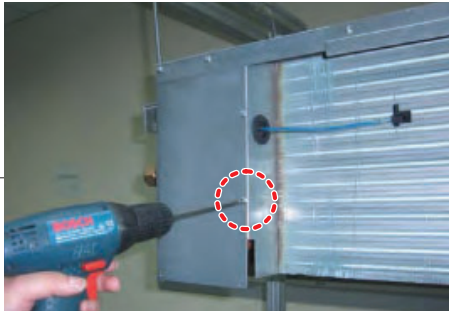


No	Parts	Procedure	Remark
1	Filter	<p>1) After disassembling 16 places indicating screws, detach Ass'y Cabi Bottom Blower. (Use +Screw Driver.)</p> <p>2) Detach from Ass'y Control In the capacitor connection wire between the Motor Fan and housing connector.</p> <p>3) After disassembling 2 places indicating screws, detach the 2 Fan Case. (Use +Screw Driver.)</p>	   





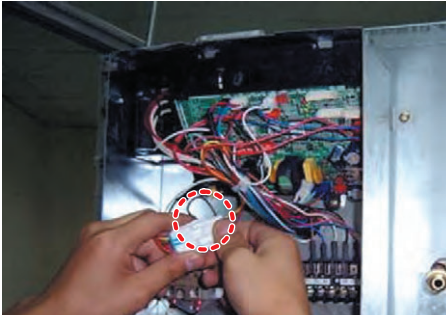

No	Parts	Procedure	Remark
		<p>4) After disassembling 2 places indicating screws, detach Fan Motor and Blower from the set.</p>	
2	Control In	<p>1) After disassembling 1 Indicating screw, detach the Cover control. (Use +Screw Driver.)</p> <p>2) Detach the Motor-Fan and Sensor Connector from the PCB.</p>	  

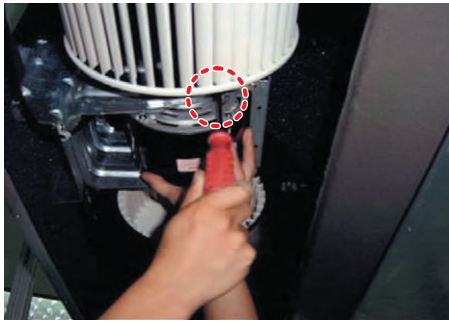


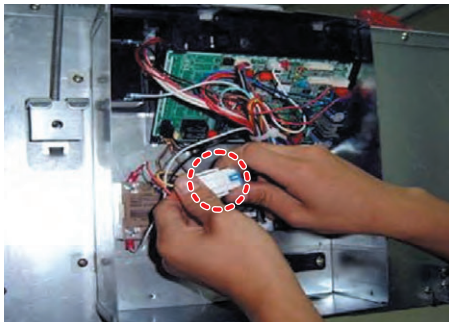
No	Parts	Procedure	Remark
		<p>3) Disassemble 4 indicating screws and detach Control In from the set. (Use +Screw Driver.)</p>	
3	Drain Pan	<p>※ Work is possible when Disassembling the Ass'y Cabi Bottom Blower.</p> <p>1) Disassemble 7 indicating screws and detach Ass'y Cabi Bottom Drain. (Use +Screw Driver.)</p>	

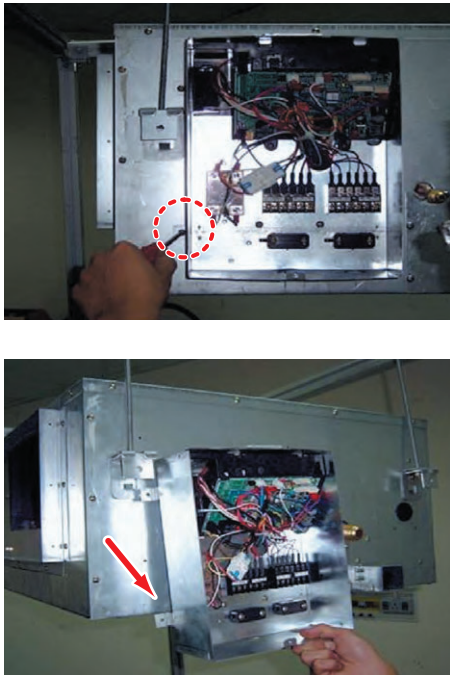
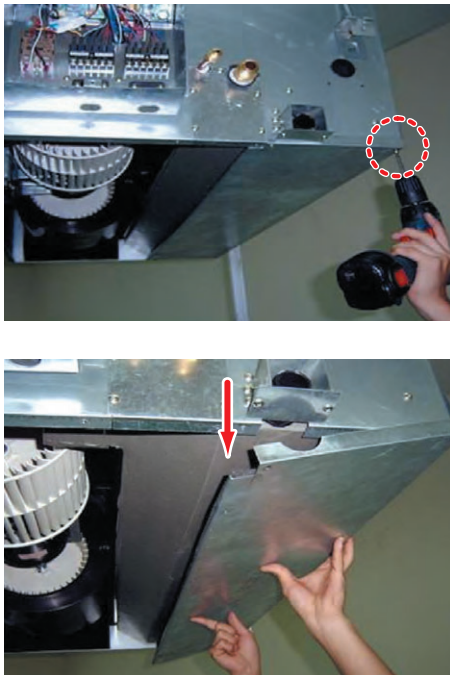
No	Parts	Procedure	Remark
		<p>2) Disassemble 2 indicating screws and detach Holder Pipe. (Use +Screw Driver.)</p> <p>3) Disassemble 4 indicating screws and detach the Drain Pan. (2 screws each at left and right side) (Use +Screw Driver.)</p>	   

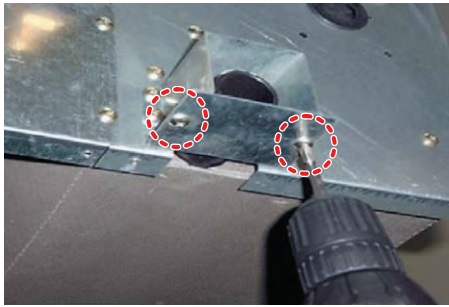
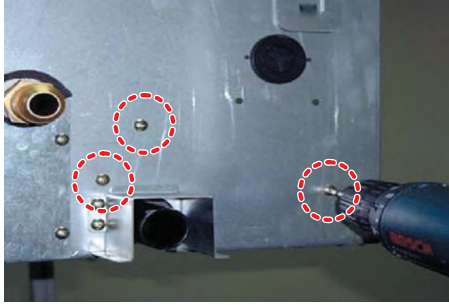
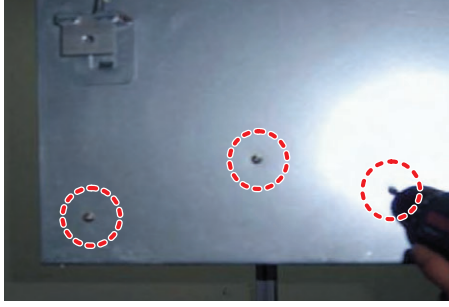
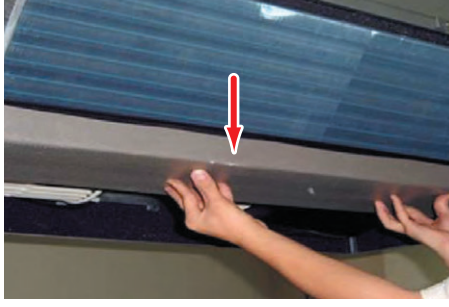
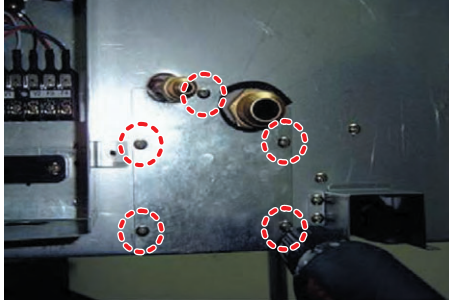
No	Parts	Procedure	Remark
4	Evap	<p>Work is possible when Disassembling the Ass'y Drain Pan.</p> <p>1) Disassemble 5 indicating screws to detach Cover Pipe.(Use +Screw Driver.)</p> <p>2) Disassemble Sensor on the Evap.</p> <p>3) Disassemble 4 indicating screws which are in the near of Hanger Plate to detach the Evap. (2 screws each at left and right side) (Use +Screw Driver.)</p> <p><b>⚠ It needs 2 peoples.</b></p>	    

■ Duct type (Mid Pressure2, High Pressure)


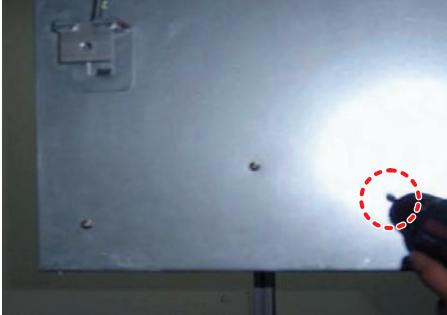

No	Parts	Procedure	Remark
1	Blower & Motor	<p>1) After disassembling 15 places indicating screws, detach Ass'y Cabi Bottom Blower. (Use +Screw Driver.)</p> <p>2) Detach from Ass'y Control In the capacitor connection wire between the Motor Fan and housing connector.</p> <p>3) After disassembling 4 places indicating screws, detach the 2 Fan Case. (Use +Screw Driver.)</p>	   

No	Parts	Procedure	Remark
		<p>4) After disassembling 2 places indicating screws, detach Fan Motor and Blower from the set. (Use +Screw Driver.)</p>	
<p>3</p>	<p>Drain Pan</p>	<p>1) After disassembling 1 Indicating screw, detach the Cover control.(Use +Screw Driver.)</p> <p>2) Detach the Motor-Fan and Sensor Connector from the PCB.</p>	  

No	Parts	Procedure	Remark
		3) Disassemble 4 indicating screws and detach Control In from the set. (Use +Screw Driver.)	
3	Drain Pan	※ Work is possible when Disassembling the Ass'y Cabi Bottom Blower.  1) Disassemble 6 indicating screws and detach Ass'y Cabi Bottom Drain. (Use +Screw Driver.)	

No	Parts	Procedure	Remark
		<p>2) Disassemble 2 indicating screws and detach Holder Pipe. (Use +Screw Driver.)</p> <p>3) Disassemble 6 indicating screws and detach the Drain Pan. (Use +Screw Driver.) (3 screws each at left and right side)</p>	   
4	Evap	<p>※ Work is possible when Disassembling the Ass'y Cabi Bottom Blower.</p> <p>1) Disassemble 6 indicating screws and detach Ass'y Cabi Bottom Drain. (Use +Screw Driver.)</p>	

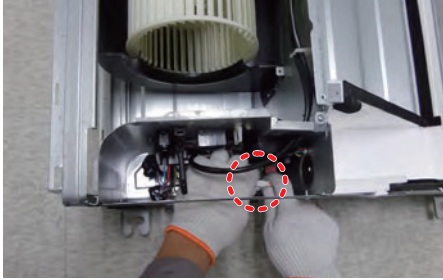
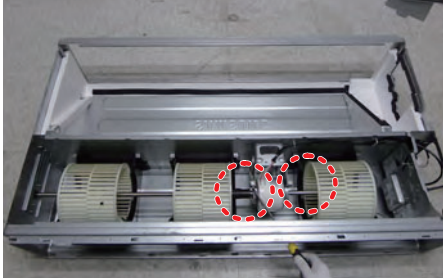

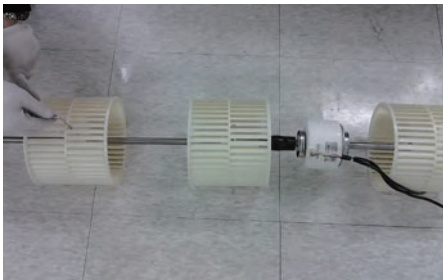
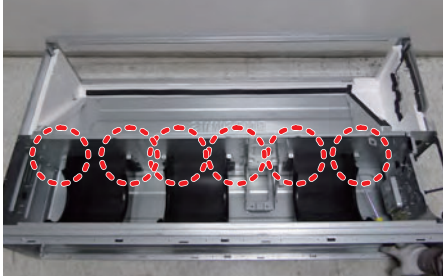


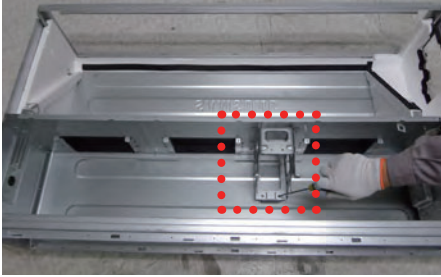
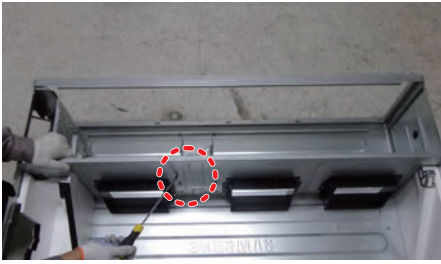
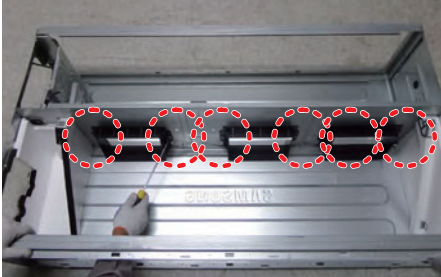
No	Parts	Procedure	Remark
		<p>2) Disassemble Sensor on the Evap.</p> <p>3) Disassemble 2 indicating screws which are in the near of Hanger Plate to detach the Evap. (1 screw each at left and right side)</p> <p><b>⚠ It needs 2 peoples.</b></p>	  


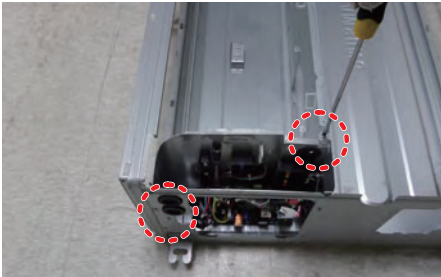
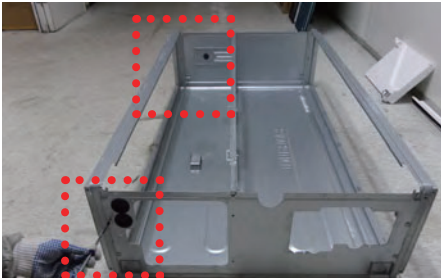
■ AM036/045/056/071/090/112/128/140HNMPKH,  
AM112/128/140HNHPKH/EU, AE071/090MNMPEH/EU

No	Parts	Procedure	Remark
1	Common	<p>1)Disassemble the Cabinet Bottom Fan. - Unscrew 11 screws</p> <p>⚠ You must turn off the Power before disassembly.</p> <p>2)Disassemble the Case Filter Pre.</p> <p>3)Disassemble the Cover Control. - Unscrew 2 screws</p> <p>4)Disassemble the Cabinet Bottom Evap. - Unscrew 8 screws</p>	   

No	Parts	Procedure	Remark
2	Drain Pan & Evap	<p>1)Disassemble the Drain Pan from the set.</p> <p>2)Disassemble the 3 Case Blower Bottom. - Unscrew 6 screws</p> <p>3)Disassemble the Cover Pipe. - Unscrew 2 screws</p> <p>4)Disassemble the Support Evap. - Unscrew 1 screws</p> <p>5)Disassemble the Evap. - Unscrew 3 screws</p>	    

No	Parts	Procedure	Remark
3	Motor & Fan	<p>1)Disassembl the connection wire,the take the Motor Fan out</p> <p>2)Disassemble the 2 Holder Motor. - Unscrew 2 screws</p> <p>3)After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.</p> <p>4)Disassemble the 3 Case Blower Top. - Unscrew 6 screws</p>	    

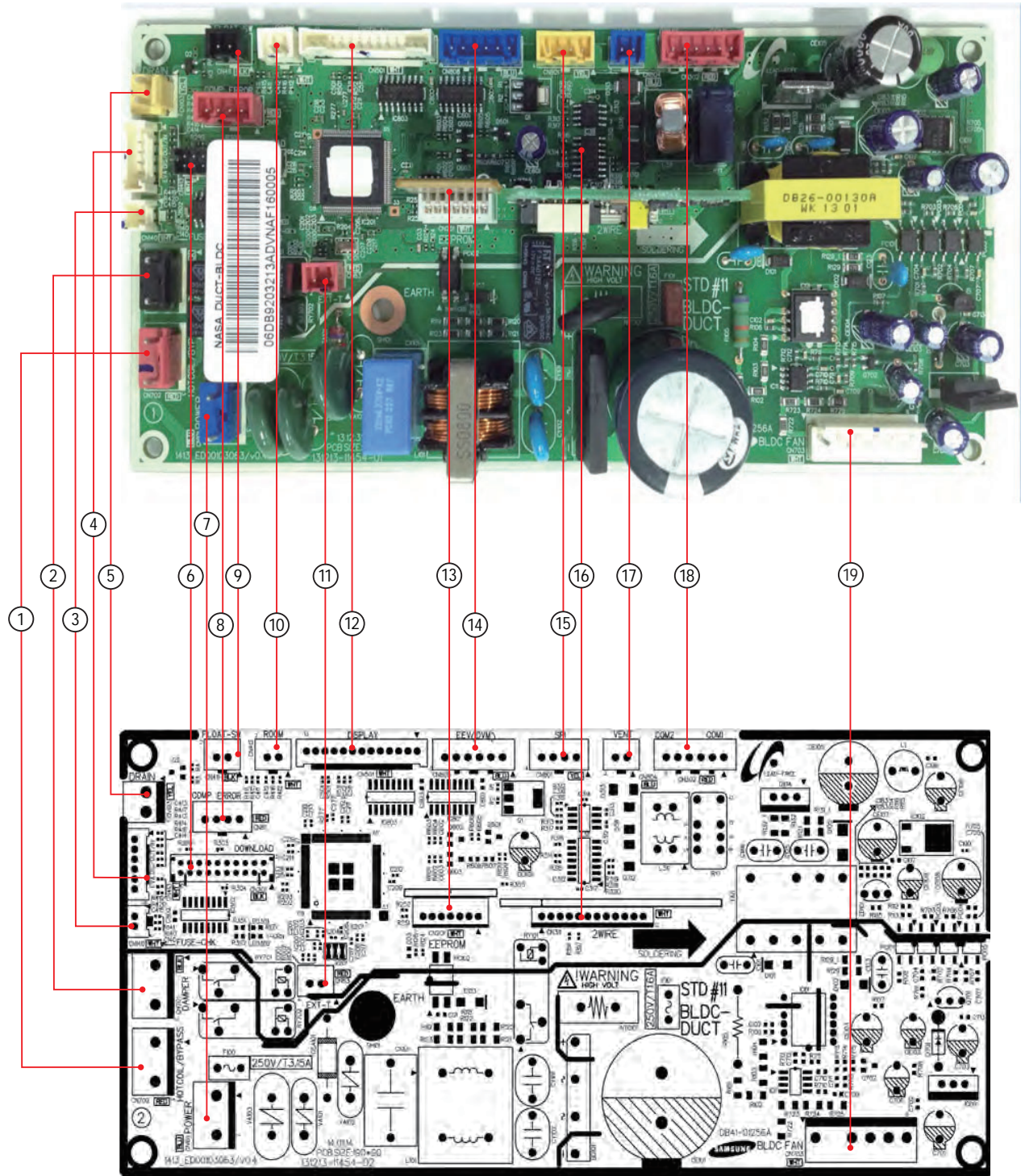
No	Parts	Procedure	Remark
		<p>5)Disassemble the Bracket Motor. - Unscrew 6 screws</p> <p>6)Disassemble the 3 Case Blower Out - Unscrew 6 screws</p>	  

No	Parts	Procedure	Remark
4	Cushion	1)Disassemble the Assy Cushion Right. - Unscrew 1 screws  2)Disassemble the Seal Cushion LF. - Unscrew 1 screws	
5	Control	1)Disassemble the Case Control. - Unscrew 2screws	
6	Frame	1)Disassemble the Frame. - Unscrew 6 screws	



### 5-1-9 Slim Home Duct

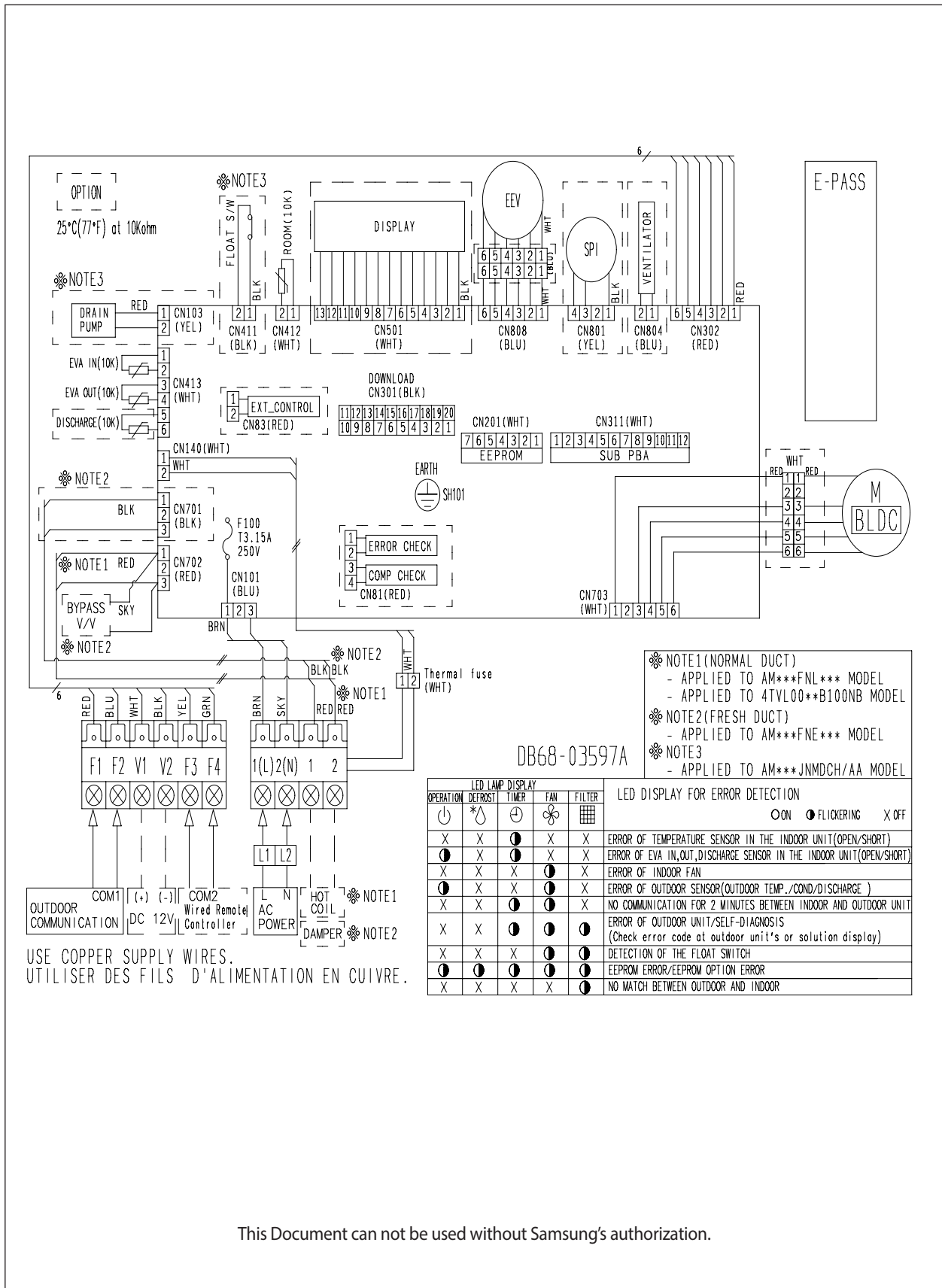
- MAIN PCB (AM017/022/028/036KNLDEH\*)





### 6-1-14 Slim Home Duct

■AM017/022/028/036KNLDEH\*



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