8-1. CONTROL BOX

OPERATING PROCEDURE

Models 15-54

1. Removing the control box cover
   (1) Remove the fixing screws (two) of the control box (A), and remove the cover. (Fig. 1)

   *At this stage, the following servicing is possible.

   1. Operation and check of the switches (listed below) which are on the control board.
      • Dip switch SW2 ···················· Capacity code setting
      • Dip switch SW3 ······················ Function change
      • Dip switch SW4 ······················ Model code setting

   2. Connection check of the lead wires (listed below) which are connected to the controller board.
      • Power supply lead wire.
      • Network remote controller transmission lead wire.
      • Fan motor lead wire.
      • LEV lead wire
      • Intake air sensor lead wire
      • Liquid piping sensor lead wire
      • Gas piping sensor lead wire
      • Power supply transformer lead wire
      • Address board lead wire
      • Drain pump lead wire
      • Drain sensor lead wire

   3. Control board exchange
   4. Condenser exchange
   5. Power supply transformer exchange
   6. Arrest exchange
   7. Intake air sensor exchange

   ( ): Optional parts

2. Removing the terminal bed cover
   (1) Remove the fixing screws (two) of the terminal bed cover (B), and remove the cover. (Fig. 2)

   *At this stage, the following servicing is possible. (Fig. 3)

   1. Operation and check of the switches (listed below) which are on the address board.
      • Rotary switches SW11, 12 ····················· Address setting
      • Rotary switch SW14 ·························· Branch port setting
      • Dip switch SW1 ······························· Function change (main)

   2. Address board exchange
   3. Power supply terminal bed exchange
   4. Transmission terminal bed exchange

PHOTOS

Fig. 1
Fig. 2
Fig. 3
**OPERATING PROCEDURE**

**Models 72·96**

1. **Removing the control box cover**
   - (1) Remove the fixing screws (four) of the control box cover (C), and remove the cover. (Fig. 4)

   *At this stage, the following servicing is possible.* (Fig. 5)

   1. Operation and check of the switches (listed below) which are on the control board.
      - Dip switch SW2 ·········· Capacity code setting
      - Dip switch SW3 ·········· Function change
      - Dip switch SW4 ·········· Model code setting

   2. Connection check of the lead wires (listed below) which are connected to the controller board.
      - Power supply lead wire.
      - Network remote controller transmission lead wire.
      - Fan motor lead wire.
      - LEV lead wire.
      - Intake air sensor lead wire.
      - Liquid piping sensor lead wire.
      - Gas piping sensor lead wire.
      - Power supply transformer lead wire.
      - Address board lead wire
        - (*Drain pump lead wire*)
        - (*Drain sensor lead wire*)

   3. Control board exchange
   4. Power supply transformer exchange
   5. Arrest exchange
   6. Intake air sensor exchange
   7. Operation and check of the switches (listed below) which are on the address board.
      - Rotary switches SW11, 12 ····· Address setting
      - Rotary switch SW14 ········ Branch port setting
      - Dip switch SW1 ········· Function change (main)

   8. Address board exchange
   9. Power supply terminal bed exchange
   10. Transmission terminal bed exchange

   ( ): Optional parts

**PHOTOS**

![Fig.4](image1)

![Fig.5](image2)
8-2. FAN and FAN MOTOR

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<td>1. Removing the control box.</td>
<td>Fig.1</td>
</tr>
<tr>
<td>(1) Remove the control box cover and terminal bed cover with procedure 8-1.</td>
<td></td>
</tr>
<tr>
<td>(2) Remove the fan motor connectors.</td>
<td></td>
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<tr>
<td>(3) Remove the fixing screws (two) of the control box and slide the control box to remove. (Fig. 1)</td>
<td></td>
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<tr>
<td>(4) Move the control box to place that is not block operation. (Fig. 2)</td>
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<tr>
<td><strong>Models 15-30</strong></td>
<td></td>
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<tr>
<td>2. Removing the fan motor</td>
<td>Fig.2</td>
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<tr>
<td>Models 15-30</td>
<td>Control box</td>
</tr>
<tr>
<td><em>After motor base (D) and bell mouse (C) attached the fan case (B) removed, motor (A) can be pull with motor base and fan along rail.</em></td>
<td>Fig.3</td>
</tr>
<tr>
<td>(1) Remove the fan motor connector (E).</td>
<td></td>
</tr>
<tr>
<td>(2) Loosen the fixing screws (F) (three) of the bell mouse (C), and removed the bell mouse (D) turning screws in direction arrow (counterclockwise). (Fig. 3)</td>
<td></td>
</tr>
<tr>
<td>(3) Remove the fixing screws (four) of the motor base(D).</td>
<td></td>
</tr>
<tr>
<td>Notice: It's necessary using the driver over 30cm length to remove the fixing screws (a). (Fixing screws are placed back)</td>
<td></td>
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Be careful on removing heavy parts.
OPERATING PROCEDURE

(4) Slide the motor (A) with motor base (D) in direction of allow ①. (Fig. 5)

PHOTOS

Model 36·48·54

*Motor maintenance procedure is almost 15~30 models procedure.
Models 36~54 have twin shaft motor. After removing the fan and fan case which are in front of motor, remove the motor.

(1) Remove the bell mouse of the front fan motor with procedure models 15~54.
(2) Loosen the setting screws of the front fan, removed the fan.
(3) Remove the front fan case.
(4) Operate with procedure models 15~30.

Notice: Fixing screws of the fan case are shown Fig. 7. Remove the fixing screws (H), fan case can be removed.
OPERATING PROCEDURE

Models 72-96

1. Removing the control box.
   (1) Remove the control box cover 1 with procedure 8-1.
   (2) Remove the fixing screws (four) of the control cover 2, and remove the control cover 2. (Fig. 7)
   (3) Remove the fan motor connectors.
   (4) Remove the fixing screws (three) of the control box and remove the control box. (Fig. 8)
   (5) Move the control box to place that is not block operation. (Fig. 9)

2. Removing the fan motor

   *After the fan (A), the fan case (B) and the bell mouse (C) removed, motor can be pull with motor base and inner fan along rail.

   (1) Remove the fixing screws (three) of the bell mouse (C), and remove the bell mouse (C). (Fig. 3)
   (2) Loosen the setting screws (G) of the front fan, removed the fan. (Fig. 10)

PHOTOS

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Be careful on removing heavy parts.
(3) After removing the fixing screws (H)(as shown models 36-48-54) of the front fan case (B) and remove the fan.
Pull the fan case (B).

(4) Remove the fixing screws (K)(three) of the bell mouse (J) attached fan case (L), and remove the bell mouse (J).
(Fig.12)
(5) Remove the fixing screws (four) of the motor base(D).

Notice: It's necessary using the driver over 30cm length to remove the fixing screws (a).
(Fixing screws are placed back)(Fig. 13)

(6) Slide the motor (M) with motor base (D) in direction of arrow ②. (Fig. 14)

Notice: It's not necessary removing the fan case (L).

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**OPERATING PROCEDURE**

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**PHOTOS**

Be careful on removing heavy parts.
### 8-3. LEV, THERMISTOR (Liquid/Gas as piping temperature detection)

#### OPERATING PROCEDURE

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<td>15–54</td>
<td>1. Removing the LEV.</td>
<td>(1) Remove the control box cover with procedure 8-1. (2) Remove the fixing screws (four) of the heat exchanger cover (A), and remove the cover (A) (Fig. 1) (3) Remove the LEV driving motor with a double spanner (Fig. 2)</td>
</tr>
<tr>
<td>72–96</td>
<td>1. Removing the LEV.</td>
<td>(These models have 2 LEV) (1) Remove the fixing screws (three) of the heat exchanger cover (A), and remove the cover (A). (2) Remove the fixing screws (four) of the maintenance cover (B), and remove the cover (B) (Fig. 3) (3) Remove the LEV driving motor with a double spanner (Fig. 4)</td>
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#### PHOTOS

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<td>Fig. 2</td>
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<td>Fig. 3</td>
<td>LEV Thermistor (B)</td>
</tr>
<tr>
<td>Fig. 4</td>
<td>LEV Thermistor (A)</td>
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</table>

Be careful on removing heavy parts.
**8-4. HEAT EXCHANGER**

**OPERATING PROCEDURE**

Models 15-54
1. Removing the heat exchanger.
   (1) Remove the heat exchanger cover with procedure 8-3-1.
   (2) Remove the bottom plate which is air outlet side (fixing screws: ten) (Fig. 1)
   (3) Remove the drainpan (Fig. 2)

**PHOTOS**

![Fig.1](image1.png)

![Fig.2](image2.png)

![Fig.3](image3.png)

Be careful on removing heavy parts.
### Operating Procedure

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<td>(4) Remove the maintenance cover (fixing screws: two) (Fig. 4)</td>
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<td>(5) Remove the heat exchanger (fixing screws: four) (Fig. 3, 5)</td>
<td></td>
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</tbody>
</table>

*Removeryd heat exchanger is as shown Fig. 6*

**Be careful on removing heavy parts.**
**OPERATING PROCEDURE**

Models 72·96

1. **Removing the heat exchanger.**
   - (1) Remove the refrigerant piping and drain hose from main unit. (Be care that water is not leaking from drain hose.)
   - (2) Remove the power supply wire and the transmission line. (Make sure that power source is turning off.)
   - (3) Pull down the main unit
   - (4) Turn over the main unit upside the bottom plate
   - (5) Remove the bottom plate which is air outlet side. (fixing screws: fifteen) (Fig. 7)
   - (6) Remove the drainpan. (Fig. 8)

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<th>Models 72·96</th>
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<tr>
<td>1. Removing the heat exchanger.</td>
</tr>
<tr>
<td>(1) Remove the refrigerant piping and drain hose from main unit. (Be care that water is not leaking from drain hose.)</td>
</tr>
<tr>
<td>(2) Remove the power supply wire and the transmission line. (Make sure that power source is turning off.)</td>
</tr>
<tr>
<td>(3) Pull down the main unit</td>
</tr>
<tr>
<td>(4) Turn over the main unit upside the bottom plate</td>
</tr>
<tr>
<td>(5) Remove the bottom plate which is air outlet side. (fixing screws: fifteen) (Fig. 7)</td>
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<tr>
<td>(6) Remove the drainpan. (Fig. 8)</td>
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<tr>
<td><img src="image" alt="Fig.7" /></td>
</tr>
<tr>
<td><img src="image" alt="Fig.8" /></td>
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**OPERATING PROCEDURE**

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<tr>
<td>(7) Remove the fixing screws (three) of the heat exchanger cover, and remove the</td>
<td></td>
</tr>
<tr>
<td>cover. Remove the fixing screws (four) of the maintenance cover, and remove the</td>
<td></td>
</tr>
<tr>
<td>cover. (Fig. 10)</td>
<td></td>
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<tr>
<td>(7) Remove the heat exchanger.</td>
<td></td>
</tr>
<tr>
<td>Fixing screws (non-piping side) : two (Fig. 9)</td>
<td></td>
</tr>
<tr>
<td>Fixing screws (piping side) : two (Fig. 11)</td>
<td></td>
</tr>
<tr>
<td>*Removed heat exchanger is as shown Fig. 12</td>
<td></td>
</tr>
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Be careful on removing heavy parts.
8-5. Control Box Inside Layout

Models 15-54

Models 72-96
8-6. SENSOR POSITION

- **PEFY-P15NMHU-E**
  - Liquid sensor
  - Gas sensor

- **PEFY-P18 24NMHU-E**
  - Liquid sensor
  - Gas sensor

- **PEFY-P27 30NMHU-E**
  - Liquid sensor
  - Gas sensor

- **PEFY-P36 48NMHU-E**
  - Gas sensor (36)
  - Liquid sensor
  - Gas sensor (48)

- **PEFY-P54NMHU-E**
  - Liquid sensor
  - Gas sensor

- **PEFY-P72 96NMHU-E**
  - Liquid sensor (72-96)
  - Gas sensor (72)
  - Gas sensor (96)