

# Maintenance

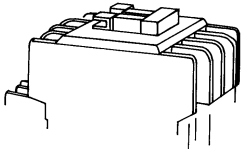
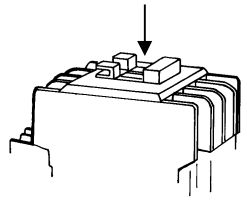
This chapter describes the possible causes of troubles you may encounter and the actions to be taken against them.

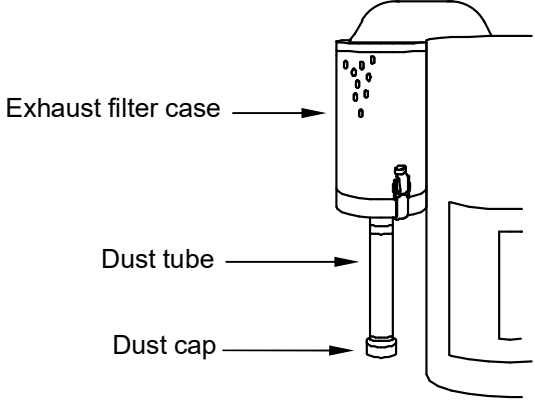


Never fail to examine the causes of any trouble and take remedies after allowing the molder to cool for 5 hr after stopping. (Use gloves.) It is very dangerous during and immediately after operations becomes it is very hot.

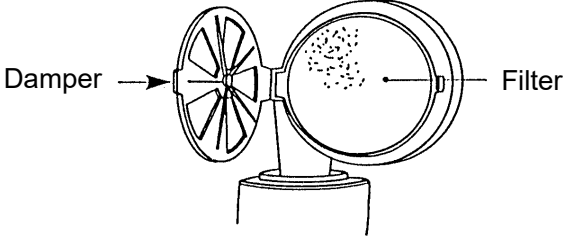
Should any burn occur due to negligence of the above, immediately cool the very part with cold fresh water and seek prompt medical treatment. Checking operations should be made only by authorized personnel.

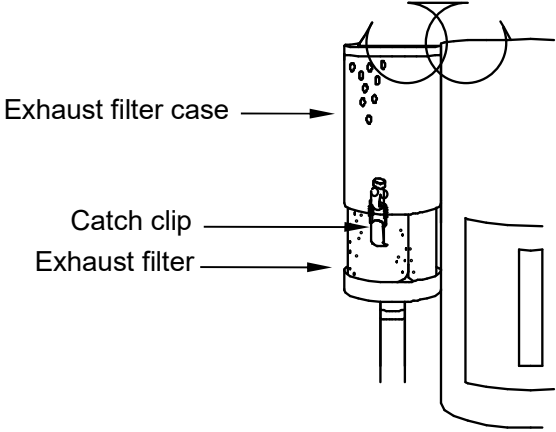
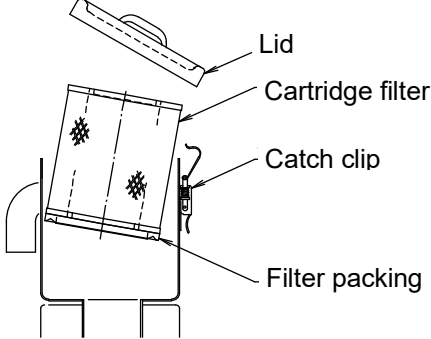
## 1. Daily maintenance

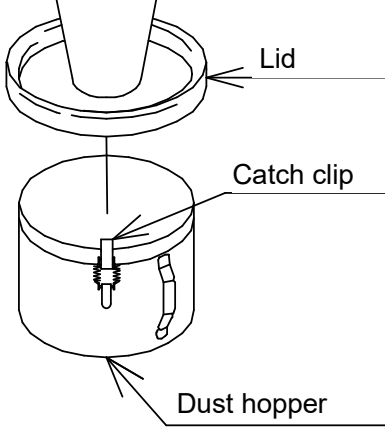
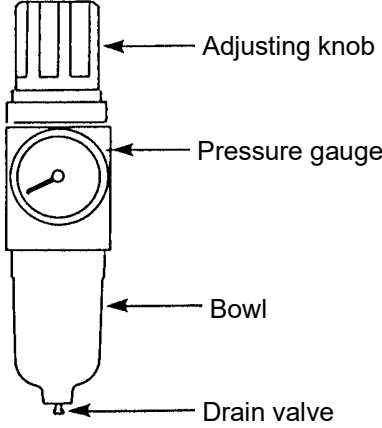
Maintenance item	Description
<p>Check of the electromagnetic contact unit (heater relay)</p> <p>※Confirms the condition (deposit) of breaker points.</p>	<p>When the breaker points does deposit, <u>it causes fire occurrence and becomes an terrible dangerous condition.</u></p> <p>If the electromagnetic contact unit becomes the condition of figure, <u>quickly, replaced to new parts.</u></p> <p><u>And, until the parts replace completes, don't start the unit ever.</u></p> <p style="text-align: center;"><u>The condition as the center section was hollow when the unit stops.</u></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Normal condition</p> </div> <div style="text-align: center;">  <p>Abnormal deposit condition</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; padding: 2px 10px; display: inline-block;"><b>NOTE</b></div> <ol style="list-style-type: none"> <li>1. The form sometimes differs on the model.</li> <li>2. The above figure is the figure condition that saw the electromagnetic contact unit from diagonal front.</li> <li>3. Even if there is not abnormal, <u>the switching times of the breaker points replace at 1,000,000 times or within 1 year of using term.</u></li> </ol> </div>

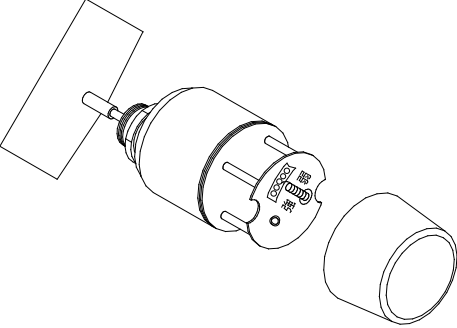
Maintenance item	Description
Discharge of dust from dust tube	<p>Discharge the dust that has clogged in the dust tube. Remove the dust cap on the bottom of the dust tube and discharge the dust.</p> <p style="text-align: center;"><b>NOTE</b></p> <p style="text-align: center;">After discharging, be sure to refasten the dust cap securely.</p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>WARNING</b></p> <p>During continuous operation, the surface of the exhaust filter case reaches high temperatures (exceeding 130°C). Avoid direct contact with the skin.</p>
Temperature confirmation	<p>Confirm whether dry temperature is controlled at the setting temperature of controller.</p> <p style="text-align: center;">&lt;Confirming method&gt;</p> <p><b>【In case of dry temperature】</b></p> <ol style="list-style-type: none"> <li>1. After pushing the <b>SV</b> switch of the controller once, do the 『S V』 indicator light up and confirm a setting value with dry temperature. ↓</li> <li>2. Pressing <b>SV</b> switch, do display the dry temperature and compare it with the setting value. ↓</li> <li>3. If the setting value is a degree as <math>\pm 2 \sim 3^{\circ}\text{C}</math>, the dry temperature is normal.</li> </ol>

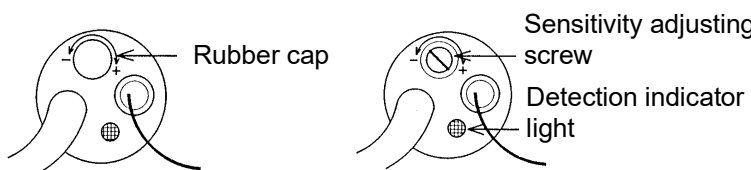

## 2. Weekly maintenance

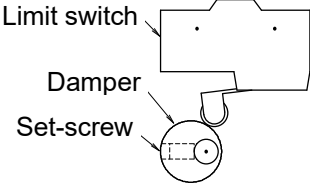
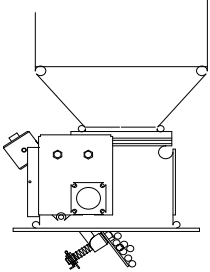

Maintenance item	Description
Filter cleaning	<p style="text-align: center;"><b>⚠ CAUTION</b></p> <ol style="list-style-type: none"> <li>1. Use a mask because the clinging particles of the filter spray the spraying clean of dry air in the air.</li> <li>2. When a filter is clogged, it does the looseness of operation temperature and airflow rate. Then, be careful because it causes the fire.</li> </ol> <ul style="list-style-type: none"> <li>• When a filter is clogged, remove a filter and blow clean dry air and remove clinging particles.</li> <li>• With the around environment of the unit body, the dirty condition of filter changes. Perform the checking and cleaning.</li> <li>• After check, set the filter in original condition and fasten surely.</li> <li>• When the filter clogging is terrible, exchange for the new filter.</li> </ul>
Filter for blower suction port	<p>Open the damper of the blower suction port and make sure the filter is not clogged. If the filter is clogged, remove it and blow it with clean, dry air to remove clinging particles.</p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>NOTE</b></p> <p style="text-align: center;">Do not remove the metal screen on the inside.</p>

Maintenance item	Description
<p>Exhaust filter of exhaust filter case inside</p>	<p>Remove the catch clips (2) on the bottom of the exhaust filter case and remove the exhaust filter. Blow clean dry air inside the exhaust filter and remove clinging particles.</p>  <p>After cleaning, roll the exhaust filter into a cylindrical shape and insert it into the exhaust filter case without wrinkling it.</p>
<p>Cleaning for convey filter</p>	<p>Removing a filter, check and clean up the filter clogging.</p> 

Maintenance item	Description
Dust hopper for air source unit	<p data-bbox="570 323 1365 354">Remove the dust hopper and remove the fine particle that is stagnant inside.</p>  <p data-bbox="570 842 1409 905">※The degradation of packing be terrible and exchange for the new packing when being transformed, discoloring and becoming solid.</p>
Air kit	<p data-bbox="570 959 1409 1100">Draw up the adjusting knob of the filter regulator and remove a lock. Then, turn the adjusting knob to the left and confirm whether or not the instruction pressure of pressure gauge becomes “0 (zero)”. And, discharge drain that is stagnant in the bowl.</p> <p data-bbox="570 1108 1338 1171">The discharge forms if pressing the drain valve in lower part of the bowl. Receive the drain with the can.</p> 


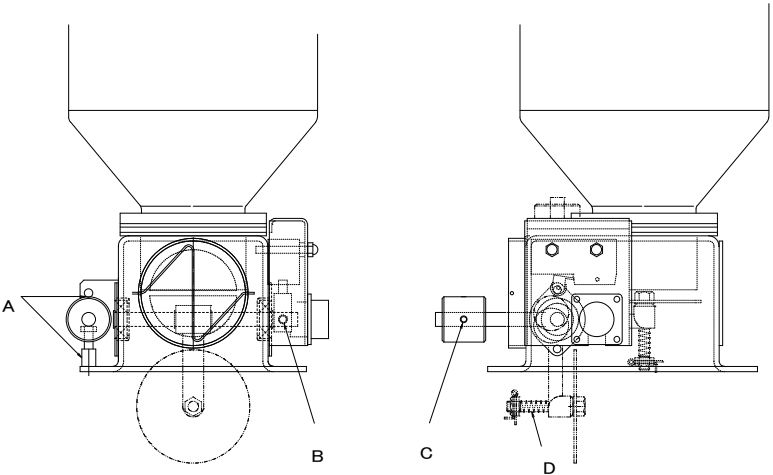
Maintenance item	Description
Sensitivity adjustment by the paddle type level gage (Using the paddle -type level gage)	<p>When the level gage doesn't sense correctly by the kind of material, the sensitivity adjustment is necessary.</p> <p><b>【Adjusting method】</b> Adjust sensitivity at the specific gravity of convey material.</p> <p>① After turning the lid of the level gage, and remove.</p> <p>② Change the position of the installation hole of spring.</p> <p>When moving a spring to the low position, the sensitivity up. And, when moving a spring to the high position the sensitivity down.</p> 

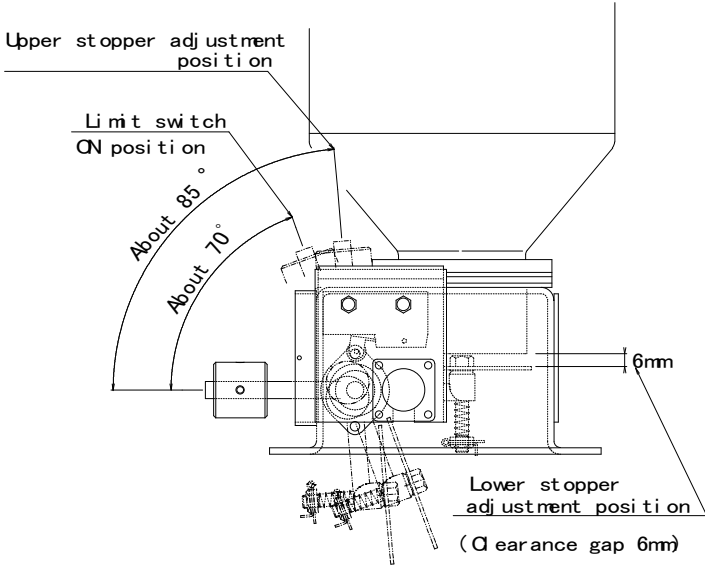
Maintenance item	Description
<p>Weigh request gauge (Proximity switch) Sensitivity adjustment method</p>	<p>When not measuring the full material correctly, adjust the sensitivity of the proximity switch by the following procedure.</p> <p>(1) Remove material in the glass tube.</p> <p>(2) Confirm there is no between the end of proximity switch and glass tube. If there is a gap between them, loosen fastening screws (2pcs.) of proximity switch fitting bracket and fix proximity switch with its end touching glass tube.</p> <p>(3) Remove the rubber cap at the back of proximity switch.</p> <div style="text-align: center;">  </div> <p>(4) The following ①, ②, ③ and ④ operations are performed with the attached screwdriver.</p> <p>① Confirm the “lights-OFF” of detection indicator light under the condition without material. (When lighting ON, the sensitivity adjustment screw of inside is turned to the – direction (Left rotation). Then, stopped in the “lights-OFF” position.)</p> <p>② Next, in the condition of ①, turn the sensitivity adjustment screw to the + direction (Right rotation) slowly. Then, stopped in the “lights-ON” position of the motion indicator. (The position of the sensitivity adjustment screw is memorized.)</p> <p>③ The material is supplied under the condition of ①, and the sensitivity adjustment screw is turned to the – direction (Left rotation) slowly. Then, stopped in the “lights-OFF” position of the motion indicator.</p> <p>④ The position of sensitivity adjustment screw is stopped in middle of ② and ③. (The sensitivity setting is completed.)</p> <p><b>NOTE (1)</b> Perform the sensitivity setting with the actual using material. And, when there are various material, the ② and ③ operation are performed with light material of appearance specific gravity.</p> <div style="text-align: center;">  <p>Without material [Lights-OFF]    With material [Lights-OFF]    Middle of ② and ③ ▲ Setting point    Without material (memory) [Lights-ON]</p> <p>「消火」    「消火」    ▲ 設定点    「点火」</p> </div> <p>(5) The rubber cap removed in the step 3 is installed. Perform the material conveyance and confirm that the detection indicator lights up.</p>

Maintenance item	Description								
<p>Adjustment for the Jet Clone damper cam in upper part of the dry hopper (In case of using Jet clone)</p>	<p>When the damper doesn't open until the full signal appears on, adjust a damper cam by following procedure.</p>  <table border="1" data-bbox="581 571 1409 781"> <thead> <tr> <th>Step</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Loosen the setscrew with a hexagon rod spanner (2.5mm).</td> </tr> <tr> <td>2</td> <td>Adjust the damper position for limit switch to become ON at the position where the damper fell from the horizontal 45°- 50°.</td> </tr> <tr> <td>3</td> <td>After adjusting the cam, secure it by tightening the setscrew.</td> </tr> </tbody> </table>	Step	Description	1	Loosen the setscrew with a hexagon rod spanner (2.5mm).	2	Adjust the damper position for limit switch to become ON at the position where the damper fell from the horizontal 45°- 50°.	3	After adjusting the cam, secure it by tightening the setscrew.
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<p>Dry hopper upper part Jet clone Control for balance weight</p>	<p>When the material adheres to damper by static electricity, etc., the case become the right-figure condition is sometimes. In such a case, loosen the setscrew×2 for balance weight until and slide every about 5 mm back and adjust until the damper becomes horizontal. Tighten a screw if the adjustment ends and fix it.</p> 								
<p>Removing and air leak of hose</p>	<p>Check the removing and air leak of hose. ※At time of the air leak, exchange to the new hose.</p> <p>[Example of the checking method for the air leak] In the checking method, hang a string or a thread near the hose. In the shaking condition of a string or a thread, the air leak can be confirmed.</p>								
<p>Switch unit for electromagnetic valve and Contact unit</p>	<p>Confirm whether or not there is not the dissolution and consumption in point of tact by installation the switch unit for electromagnetic and contact unit in the control panel. ※ When there is the dissolution and consumption of the setting, exchange a part.</p> <p style="text-align: center;"> <b>CAUTION</b></p> <p>The check is after stop the unit, always perform after turned "OFF" the power breaker in the front.</p>								



### 3. Monthly maintenance

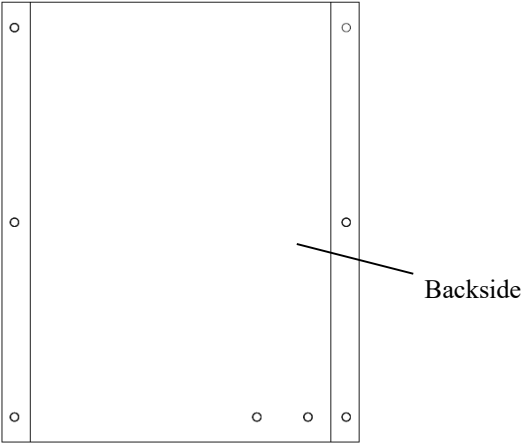
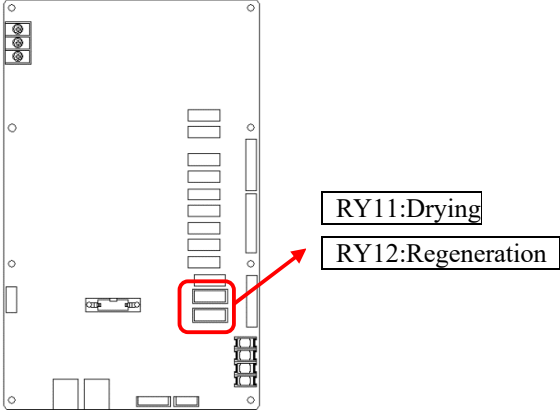
Maintenance item	Description
<p>Rising fastens for the terminal</p>	<p>Confirm the loosening of the wiring connection part of the electronics equipment inside the control panel and in the unit. And, perform the rising fastens in the connection part.</p> <p style="text-align: center;"> <b>CAUTION</b></p> <p>The check is after stop the unit, always perform after turned "OFF" the power breaker in the front.</p>
<p>Check for each jet clone part</p>	<p>A: Check if the two upper and lower stoppers (M6) aren't loosened.          ※When it loosened, refer to next page "Stopper adjustment figure" and tighten up it once more.</p> <p>B: Remove a cover and check if the hexagon socket head set screw for cam isn't loosened. Make open/close the damper at the same time and check if the limit switch is no error.          ※When it loosened, refer to next page "Stopper adjustment figure" and tighten up it once more.</p> <p>C : Check if the hexagon socket head set screw which stops balance weight isn't loosened.          ※When loosened, fasten up and fix a screw.</p> <p>D: Check if there is not an error in spring, bolt, nut and split pin.          ※When making an error, replace to new article.</p> <div style="text-align: center;">  </div>

Maintenance item	Description
Check for each jet clone part	 <p style="text-align: center;">Stopper adjustment figure</p>

#### 4. Every six months maintenance

Maintenance item	Description
Bolt and Nut in each unit part	Check about whether there is not loosening of bolt and Nut at each part of the unit. Then, perform rising fastens.

## 5. Every year maintenance

Maintenance item	Description
<p>Controller main circuit board</p>	<p>Replace the drying heater output relay.</p> <p>1. Turn STOP the operation <b>RUN/STOP</b> switch of the device, and open the control panel of the device after turning "OFF" the power breaker on the right side of the control panel.</p> <p style="text-align: center;">⇓</p> <div style="text-align: center;">  </div> <p>2. Remove the cover (screwed at three points) on the back side of the control panel.</p> <p style="text-align: center;">⇓</p> <p>3. The second lowest relay is a relay for the drying heater. (RY2: Drying heater)</p> <p style="text-align: center;">⇓</p> <div style="text-align: center;">  </div> <p>4. Remove the relay and replace with a new one.</p> <p>5. Install the backside cover after replacement.</p>