

**Items Used in This Procedure**

Included Items		Items Included with Main Unit
Spindle unit(1)	Belt(1) (short, for DWX-4) Belt(1) (long, for DWX-51D)	T-shaped hexagonal screwdriver(1)

There are two types of belts included. The DWX-51D uses the longer belt (length: 170 mm).

**Replacement**

**WARNING** When performing replacement work, switch off the main unit's power switch, and pull out the power cord from the unit. Attempting such operations while the machine is connected to a power source may result in injury or electrical shock.

**CAUTION** Be sure to perform operations as specified by these instructions, and never touch any area not specified in the instructions. The machine may move in an unexpected way, resulting in injury or burns.

**CAUTION** Do not touch the spindle unit or the surrounding areas immediately after milling has ended. Doing so may result in burns.

**CAUTION** Remove the milling tool before performing replacement work. Contact with the blade may cause injury.

**1. Preparing for Replacement**

- 1 Move the spindle unit into the standby position, and turn the power on.
- 2 If the milling bur is attached to the spindle unit, press the operation button on the main unit, and remove the milling bur from the spindle unit.

**3** **Show VPanel.**  
Click (VPanel icon) in the task tray.  
VPanel will appear. If you cannot find in the task tray, start the program from the Windows [Start] screen (or the [Start] menu).

**How to start VPanel from the Windows [Start] screen (or [Start] menu)****Windows 8 / 8.1:**

Right-click the background in the [Start] screen to display the app bar, and click [All Apps]. Click the [VPanel for DWX-51D] icon under [Roland DWX-51D].

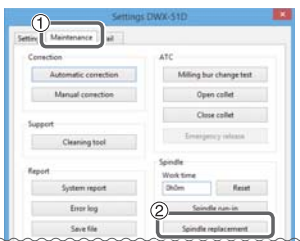
**Windows Vista / 7:**

From the [Start] menu, click [All Programs] (or [Program]), then [Roland DWX-51D]. Then click [VPanel for DWX-51D].

- 4 **Click .**  
The [Settings] screen will appear.



- 5 **Adjust the spindle unit position.**  
① Click the [Maintenance] tab.  
② Click [Spindle replacement].  
The spindle unit will move.

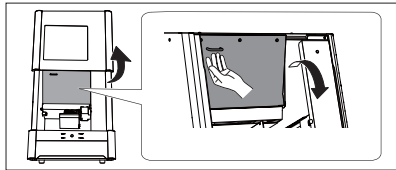


- 6 Once the above preparations have been completed, switch off the main unit's power switch, and pull out the power cord from the unit.

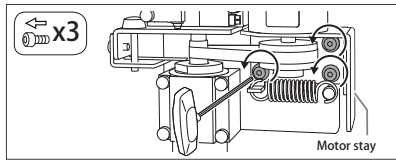
**2. Replacing the Spindle Unit**

Meaning of Illustration			
Remove	Attach	Loosen	Tighten

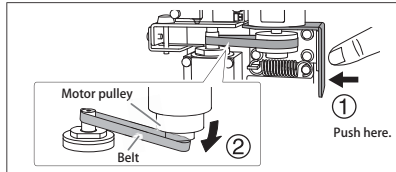
- 1 **Open the maintenance cover.**  
First open the front cover, and then open the maintenance cover.



- 2 **Loosen the screws securing the motor stay.**  
Loosen the screws about two turns.



- 3 **Remove the belt from one side.**  
Push the milling machine toward the left at the location indicated by the arrow in the figure to remove the belt from the motor pulley.



- 4 **Remove the spindle unit.**  
Remove the screws, and slowly pull both the spindle belt and the spindle unit straight out.

**Notice**  
When removing the parts, make sure that the spindle unit does not come into contact with the conductive plate.

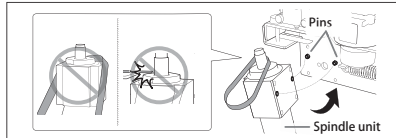
**3. Attaching the New Spindle Unit**

- 1 **Set the belt onto the new spindle unit.**  
Using an appropriate new belt, make sure the white line is on the outside of the belt.

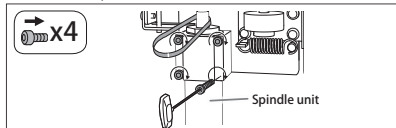
**Notice**  
There are two types of belts included. Use the longer belt (length: 170 mm) for the DWX-51D.  
If the belt orientation is incorrect, the spindle may not rotate properly.

- 2 **Attach the spindle unit.**  
Set the spindle unit onto the pins.

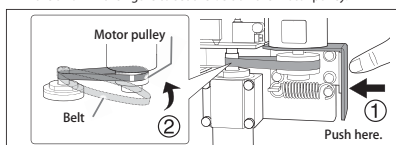
**Notice**  
Make sure the belt is not pinched behind the spindle unit.  
Make sure the spindle unit does not come into contact with the conductive plate.



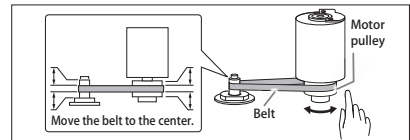
- 3 **Secure the spindle unit.**  
Secure the spindle unit with the screws.



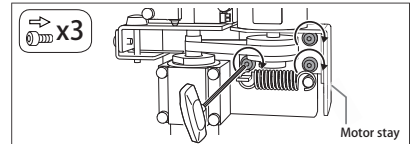
- 4 **Set the belt on the motor pulley.**  
Push the milling machine toward the left at the location indicated by the arrow in the figure to set the belt on the motor pulley.



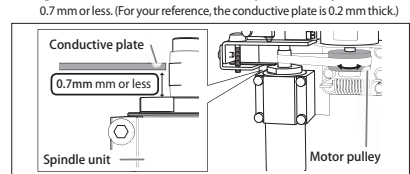
- 5 **Adjust the belt position.**  
Rotating the motor pulley will cause the belt to move. Rotate the pulley back and forth to adjust the belt to the position in the figure below.



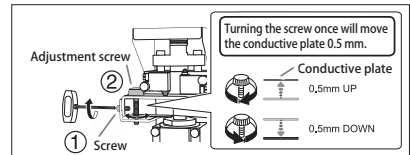
- 6 **Secure the motor stay.**  
Tighten the screws.

**4. Adjusting the Position of the Conductive Plate**

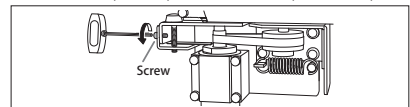
- 1 **Check the position of the conductive plate.**  
Verify the following 3 points. If all points have been met, go to step 4. If any point has not been met, go to step 2.  
① The conductive plate and the spindle unit are not in contact with each other.  
② The conductive plate and the spindle unit do not come into contact with each other or produce an abnormal noise when the motor pulley rotates.  
③ The distance between the conductive plate and the spindle unit is 0.7 mm or less. (For your reference, the conductive plate is 0.2 mm thick.)



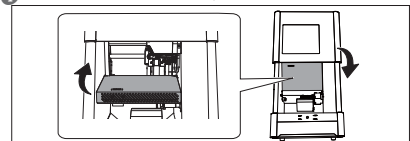
- 2 **Adjust the position of the conductive plate.**  
① Loosen the screw.  
② Rotate the adjustment screw to the left or right to move the conductive plate to a position that meets the requirements in step 1.



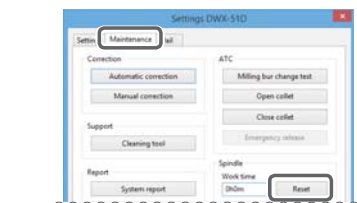
- 3 **Secure the conductive plate in position.**  
Tighten the screw to secure the conductive plate in position. Then, verify that the conductive plate is in a position that meets the requirements in step 1.



- 4 **Close the maintenance cover, and then close the front cover.**

**5. Operation after Replacing the Spindle Unit**

- 1 **Reset the work time of the spindle unit.**  
① Display VPanel, and click .② Click [Reset] in the [Maintenance] tab.



- 2 **Run in the spindle unit.**  
Failure to run in the spindle may result in unstable spindle rotation. Refer to the manual included with the milling machine for how to perform the work.  
Check for abnormal noise during run in.  
If an abnormal sound is generated, the conductive plate may be in contact with the spindle. Start over from step 2 in section 4.

- 3 **Perform automatic correction of the milling machine.**  
If automatic correction is not performed, the cutting results may be undesirable. Refer to the manual included with the milling machine for how to perform the work.