Roland

VersaUV
LEF-12

Important points to check before printing

(Measures for ink mist and UV reflected Light)

Roland DG Corporation

Important points to check before printing

Four important points (measures for ink mist and UV reflected light)

On this machine, ink affixed on the surface of the print head might be cured by ink mist (ink splash upon printing) and reflection of the UV lamp light. If ink affixed on the surface of the print head is cured, it might cause dot drop-outs, and if you use the product without taking any measures, it might cause a failure which requires replacement of the print head. While daily cleaning is important to prevent dot drop-outs, there are also four important points to check before printing. Be sure to check the four points given below:

1. You cannot use a object which reflects light as a print object (media).

Mirrors and stainless materials, etc. which are likely to reflect the UV lamp light promote curing of the surface of the print head, and therefore they cannot be used as a print object (media).

2. Set the minimum required size as the print area*.

This machine exposes the UV lamp light to all the area specified as the print area. If the blank area (where ink is not applied) in the print area is large, the reflection of the UV lamp light becomes large, promoting curing of the surface of the print head. Be sure to specify the minimum required size as the print area.

Print area

Print area

Actual print area
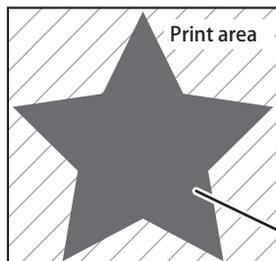
The blank area in the print area is minimized.
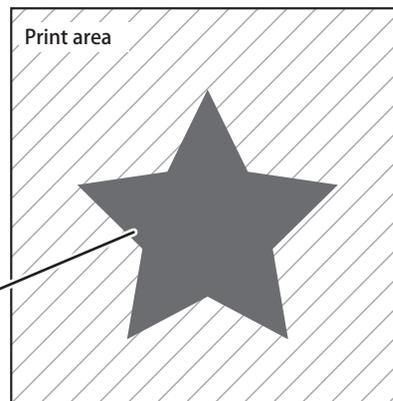
The print area has a lot of unnecessary blank areas.

Good

Not Good

* This machine requires you to specify a rectangle area in the print object where you want to make a print as the "print area". For information on how to specify the print area, refer to p. 15 "Choosing How to Specify the Print Area", p. 16 "Specify the print area directly", and p. 17 "Specifying the Print Area from the Print Center Position" of LEF-12 Master Guide.

3. A jig might be required according to the shape of the print object (media).

The distance between the print head surface and the print object (media) surface becomes longer upon print according to the shape of the print object (media). If the distance becomes longer, ink mist is likely to occur, and the UV lamp light is also likely to be reflected. To prevent ink mist and reflection of the UV lamp light, **you need to level the surface of the print object (media) as much as possible using a jig**. Some examples in which a jig is required are explained below:

* If the surface of a jig is likely to be reflected, it has an adverse effect. Coat the surface of a jig with "**matte black**" such as acrylic lacquer.

When a print object (media) has a 2 mm or more difference in the heigh

If the surface of a print object (media) is uneven and/or curved, and the height difference is 2 mm or more, a jig needs to be used.

Example ①

Even if the actual print area is flat, if the print object (media) has a 2mm or more unevenness, a jig needs to be used. Cover the 2 mm or lower area than the actual print surface with a jig so that the height difference will be less than 2 mm. There is no need to use a jig for the areas where the height difference is less than 2 mm.
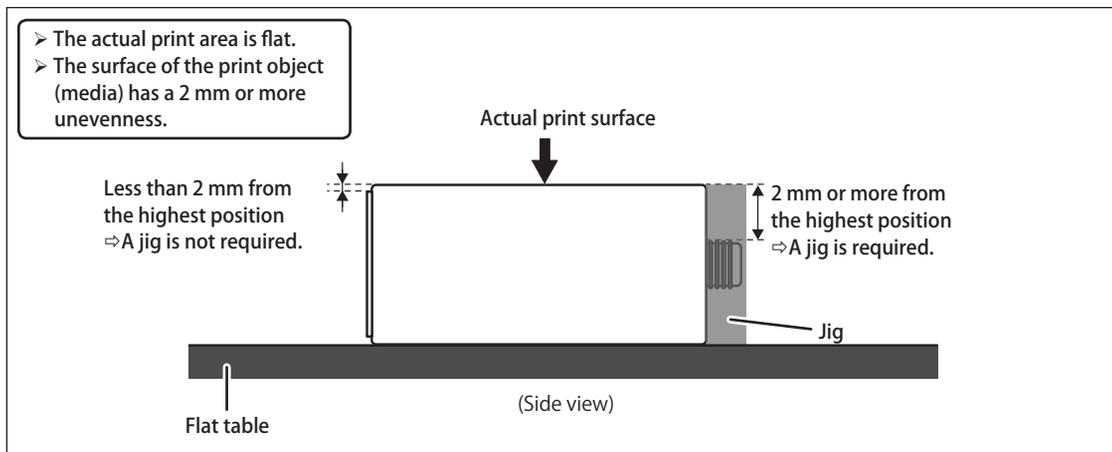
Example ②

When you make a print on a curved surface, you need to use a jig to reduce the height difference of the print object (media) to less than 2 mm.
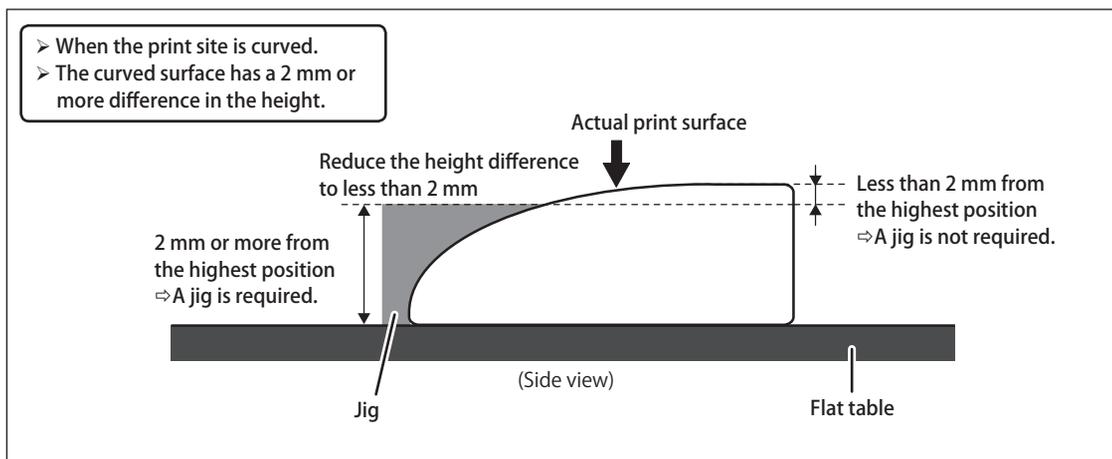
* There are conditions in the height settings when the print object (media) surface has a height difference. For more information, refer to p. 33 "Height Settings When the Print Surface is Uneven" of LEF-12 Master Guide.
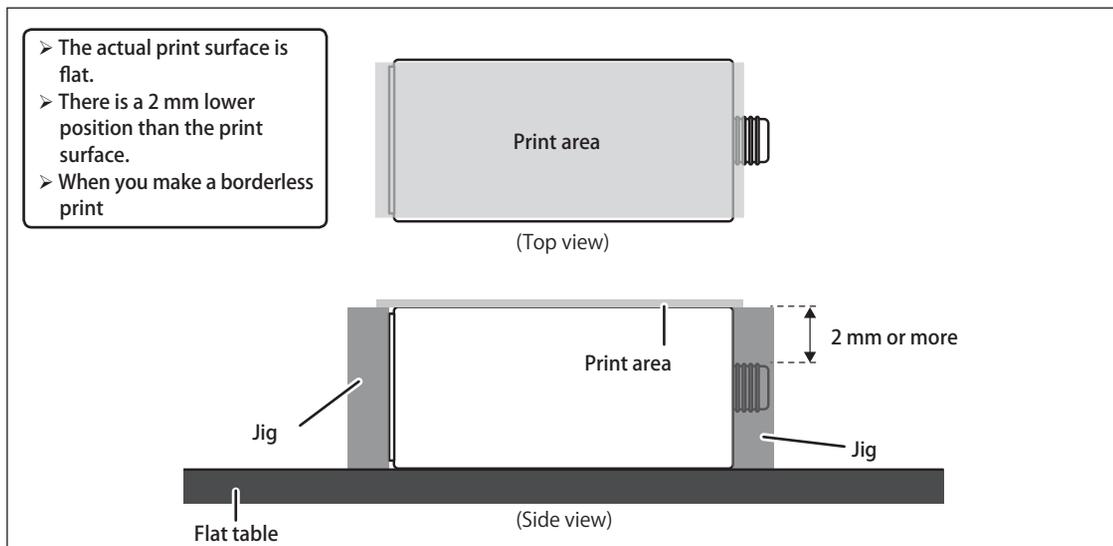
When you make a borderless print on a print object (media) with a 2 mm or more height difference

When you make a borderless print on a print object (media) with a 2 mm or more height difference, a jig according to the print area is required.

To make a borderless print, you need to specify a larger print area than the print object (media). In other words, ink is also ejected to the area outside the print object (media), and the UV lamp light is exposed to the area. Therefore, to prevent ink mist and reflection of the UV lamp light in the area outside the print object (media), a jig according to the print area is required.
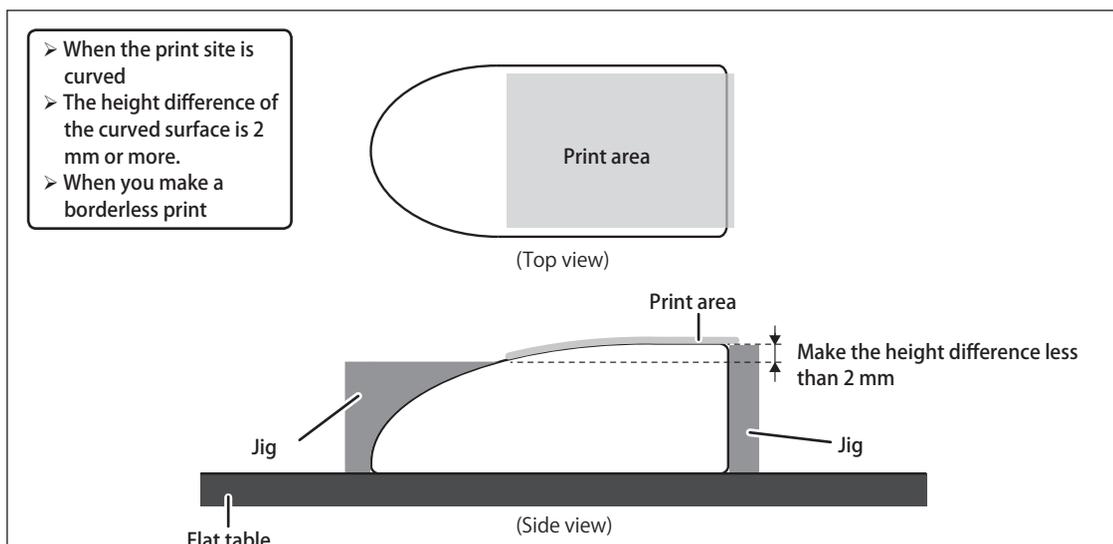
Example ①

When you specify the print area as shown in the figure below, you need to use a jig which makes the height difference between the print area outside the print object (media) and the actual print surface less than 2 mm. If the print object (media) has the shape with a 2 mm or more unevenness as shown in the figure below, you need to use a jig which takes into consideration 2 mm or more lower levels. (See Example ① in the previous page.)

- ➤ The actual print surface is flat.
- ➤ There is a 2 mm lower position than the print surface.
- ➤ When you make a borderless print

Print area

(Top view)

Print area

2 mm or more

Jig

Jig

Flat table

(Side view)

Example ②

When you specify the print area as shown below to the print object (media) with a curved surface, you need to use a jig which makes the surface height difference (see Example ② in the previous page) less than 2 mm and makes the height difference between the print area outside the print object (media) and the actual print surface less than 2 mm.

- ➤ When the print site is curved
- ➤ The height difference of the curved surface is 2 mm or more.
- ➤ When you make a borderless print

Print area

(Top view)

Print area

Make the height difference less than 2 mm

Jig

Jig

Flat table

(Side view)

4. Cover the margin areas of the flat table with black sponge when you make a print on a 3D object with a 10 mm or more height.

If the distance between the highest position of the print object (media) and the flat table surface is 10 mm or more, the UV lamp light is likely to be reflected. Cover all the margin areas of the flat table with black sponge when you make a print on a 3D object with a 10 mm or more height. Cover the adhesive sheet with black sponge as well if it is out of the print object (media).
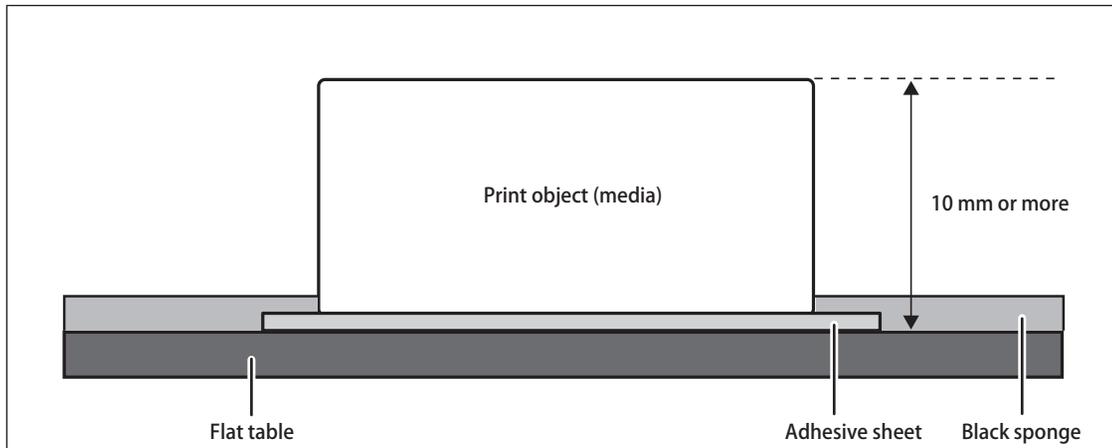
When the height from the flat table is 10 mm or more and the flat table has margin areas even if a jig is used, cover the flat table surface with black sponge.

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