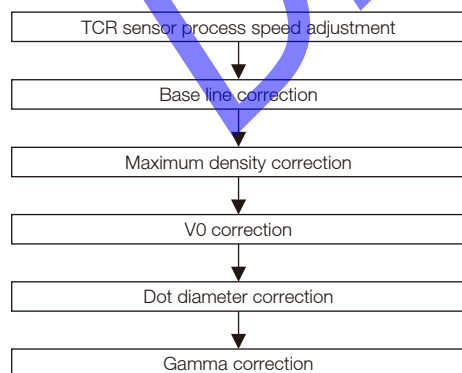


## 16.3 Image stabilization batch correction control

### 16.3.1 Image stabilization batch correction control operation flow

- Image stabilization batch correction control operation flow is shown below.



### 16.3.2 TCR sensor process speed adjustment

#### (1) Purpose

- To adjust the variation of the toner density control between the process speeds that is changed by the part degradation caused by the environment or the durability.
- To prevent the photo conductor charge dissipation such as an image running at a high humidity.
- To stabilize the characteristic of the developer in the morning.

#### (2) Method

- Performs the pre-agitation of the developing unit for a specified time and sets the standard  $V_c$  for the standard speed.
- Performs the agitation at 3 process speeds 300mm/s, 207.7mm/s, and 150mm/s. Then detects the gap between the  $V_c$  and the standard  $V_c$  at each process speed to correct the speed of the developing unit by itself.

- 
- Calculates the Vc correct values for the process speeds at 315mm/s and 225mm/s from the correct values of 3 speeds mentioned above and correct them.
  - In this way, the stable toner density control that is not based on the process speed is performed.

Note

- TCR sensor process speed adjustment is performed only in the morning.

### 16.3.3 Base line correction

#### (1) Purpose

- Preliminary preparation for the maximum density correction, dot diameter correction and gamma correction.
- To correct the sensitivity of the IDC sensor (IDCS) which measures the density of the toner transferred on the intermediate transfer belt to keep it constant considering of the dirt on the sensor, the degradation of the intermediate transfer belt, and the environmental change.

#### (2) Method

- While driving the intermediate transfer belt, turns ON the LED of the IDC sensor (IDCS) and corrects the applied voltage to the LED so that the reflect light volume from the intermediate transfer belt becomes the specified volume.
- For the accuracy enhancement and time crunch, it has 2 steps to correct; rough adjustment and fine adjustment.

### 16.3.4 Maximum density correction

#### (1) Purpose

- To maintain the maximum density of the image at a fixed condition at all times without being influenced by the environmental conditions and the number of prints.

#### (2) Method

- Creates the patch of each color; Y, M, C, and K with the developing DC bias which is currently set, and measures the patch density with the IDC sensor (IDCS).
- Calculates the proper developing DC bias value of each color based on the proportional relation of toner adhesion to the intermediate transfer belt of each color that is guessed from the developing DC bias value and measured value of the IDC sensor (IDCS) at creating the patch.

### 16.3.5 V0 correction

#### (1) Purpose

- To charge the drums appropriately compensating for deterioration of related parts, and the effects of ambient conditions.

#### (2) Method

- Determines the V0 potential target value based on the developing DC bias, background margin fixed value, environmental humidity, and slide distance of the developer.
- Calculates the grid voltage Vg as the V0 potential target value for each process speed by color based on the process speed, external temperature, and slide distance of the photo conductor.

### 16.3.6 Dot diameter correction

#### (1) Purpose

- It is performed for each sheet while in the continuous print to keep the reproducibility of the halftone or thin lines at a prescribed level, regardless of the sensitivity change of the drum or dirt on the write system

#### (2) Method

- Changes the laser light volume (MPC) and creates the pattern for the dot diameter correction of each color.
- Calculates the laser light volume (MPC) as the standard density based on the laser ON time for creating the above pattern and the detected density of the IDC sensor (IDCS).

### 16.3.7 Gamma correction

#### (1) Purpose

- The input/output data is corrected to obtain the prescribed gradation peculiarity on each screen.

#### (2) Method

- Creates the patch on the intermediate transfer belt and reads it with the IDC sensor (IDCS).
- The sensor output level read is checked against a predetermined output level with respect to print density, and the gamma is corrected according to the result.