13-2. Magnet Roller

The Magnet Roller of the Sleeve/Magnet Roller of this copier has the following magnetic characteristics. Pole S3 before poles N1 and N2 at which development takes place provides a very weak magnetic force. If developer is compacted and clogs at the Doctor Blade and, as a result, part of the surface of the Sleeve/Magnet Roller is not covered with developer, the nearby developer around S3 goes to those uncovered areas because of the weak magnetic force. This helps prevent white lines from occuring on the copy.

The magnetic flux density is maximized to allow the bristle to stand high and upright at poles N1 and N2, at which development takes place. The positioning of these two like poles together helps agitate the developer for greater uniformity, thus preventing white lines from occurring on the copy.

The Sleeve Roller, onto which developer is attracted by the magnetic fields of force set up by the poles of the Magnet Roller, turns to convey the developer toward the point of development. This means that developer fresh from the Developer Mixing Chamber is always brought to the point of development.

The Imaging Unit integrates the Developing Unit with the PC Drum into one body. Because of that, it is impossible to move the Developing Unit against the PC Drum, thereby providing a certain distance between the PC Drum and Sleeve/Magnet Roller. The Magnet Roller has therefore been made movable: the Bushing is pressed by compression springs thereby pressing the Positioning Collars on both ends of the Magnet Roller against the PC Drum. This ensures a given distance between the PC Drum and the Sleeve/Magnet Roller.

