



Standard Terminology of Image Quality in Impact Printing Systems¹

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1. Scope

1.1 This terminology presents a means to accurately describe the quality of impact printed images. This includes an up-to-date glossary and a description of probable causes for specific phenomena that relate to image quality. Illustrations to complement the definitions of copy quality terms are included.

2. Referenced Documents

2.1 *ASTM Standards*:²

F149 Terminology Relating to Optical Character Recognition

F221 Terminology Relating to Carbon Paper and Inked Ribbon Products and Images Made Therefrom

F909 Terminology Relating to Printers

3. Significance and Use

3.1 This terminology includes terms developed and approved by impact printing systems manufacturers, supplies manufacturers, and end users to describe most image quality parameters concerning impact printed images.

3.2 This terminology is intended to aid in general communications on impact printer copy quality parameters and provide a partial trouble shooting list, when less than acceptable copy quality is obtained.

4. Descriptions of Terms Specific to This Standard

4.1 *character spread*— amount of change of a character width greater or less than the original character width on the type element, printwheel, or hammer (see Fig. 1).

¹ This terminology is under the jurisdiction of ASTM Committee F05 on Business Imaging Products and is the direct responsibility of Subcommittee F05.01 on Nomenclature and Definitions.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

4.2 *correctability*— measure of image removal or cover-up by typing over with correction tapes or tabs (see Fig. 2).

4.3 *edge definition*— degree of waviness along the edge of type characters (see Fig. 3).

4.4 *extraneous ink and spatter*—the presence of ribbon ink where no images should be present. This ink cannot be removed by wiping lightly (see Fig. 4).

4.5 *fill-in*—presence of ribbon ink in an area of a printed character that should be void of ink (see Fig. 5).

4.6 *flaking or bridging*—presence of loose ribbon coating material attached to a character or in nonimage areas which may or may not be removed by lightly wiping. These flakes may also appear in ribbon cartridges and as dirt in the machine being used (see Fig. 6).

4.7 *over-strike*— a void on a printed character due to striking over the same area of the ribbon as the previous character when using a single strike ribbon (see Fig. 7).

4.8 *smudge*—tendency of a typed image to streak on to adjacent nonimage area when rubbed (see Fig. 8).

4.9 *spalling or hangers*—presence of loose ribbon coating material attached to a character which may be removed by wiping lightly. Smears may result if the loose material is disturbed, especially when encountered on multistrike ribbons (see Fig. 9).

4.10 *visual density*— the relative darkness of impact printed characters as judged by the eye (see Fig. 10).

4.11 *voids or broken characters* —absence of ink within character outline (see Fig. 11).

NOTE 1—Additional terms may be found in Terminologies F149, F221, and F909.

5. Interpretation

5.1 The probable cause of obtaining less than acceptable copy quality could be one or more of the defects listed in Section 4, or a cause(s) not currently listed, or both.