

PLATEMAKING PROCESS REQUIREMENTS

Best Practices

Establish and maintain a platemaking SOP.

Requirement

For today's fine screen graphics, plants must use:

- Plate material able to hold firm fine screen dots
- A soft brush wash-out system
- Use TL 40W/10R bulbs

Under- and over-exposure will change your highlight to shadow screen value, copy and designs element sharpness, and affect your clearance between each printed color and the print register.

Plate unit **test exposures** are imperative!



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PLATEMAKING PROCESSING REQUIREMENTS

Exposure

- Recommend vacuum sheet = .004 thickness
- Cover sheet must be clean, hole free, and replaced regularly
- Image area must be at least 1/4" from the edge of the plate
- Plate must be properly trimmed, avoiding curled edges

Vacuum

Poor vacuum and/or image distortion will result if:

- Vacuum house or connections are loose
- Vacuum pump fails to operate
- Vacuum line filter is clogged or dirty
- Vacuum sheet has pin holes trimmed too short failing to cover the entire grid of vacuum or is stretched due to age or mishandling

Exposure

- Stouffer 21-step Sensitivity Guide is recommended for exposure tests
- Solid step 15-17 is adequate for most copy
- Refer to individual manufacturers' plate exposure specifications for correct step level
- Note: exposure lamp UV output decreases with age
- Repeat exposure tests as required
- Exposure lamps require "warm-up" to attain consistent exposure
- A 5-minute period is recommended prior to first exposure

Length of Exposure

- Extremely fine screen (100 line vs 85 line) images will require more exposure
- Refer to the Platemaking SOP procedure and 21-step Stouffer test to set the proper exposure values relative to screen value type



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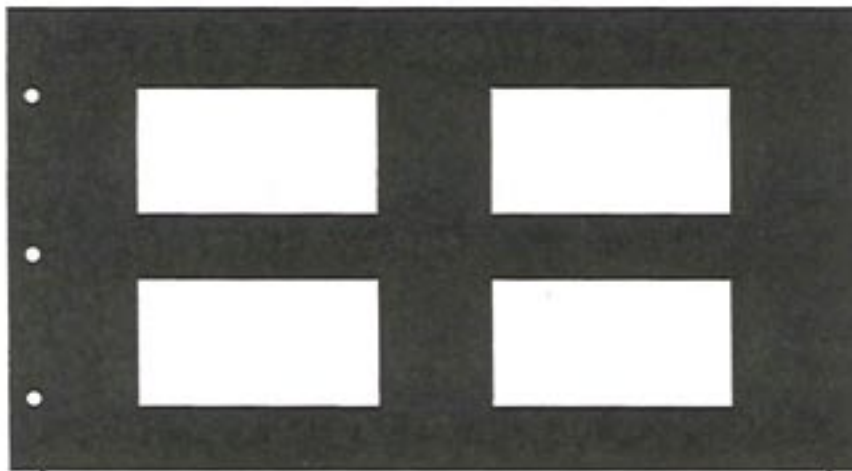
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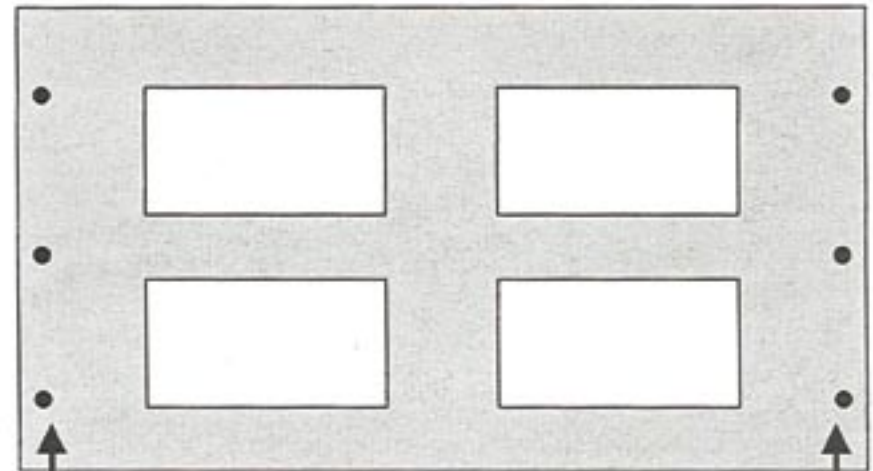
PLATEMAKING REQUIREMENTS

Supplied Film Negative



Round and oblong
punched pin hole

Press Plate



Round punched
pin holes



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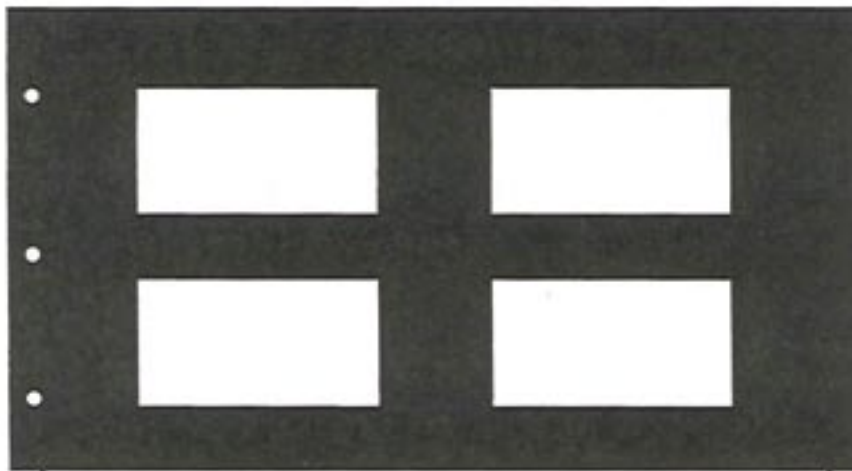
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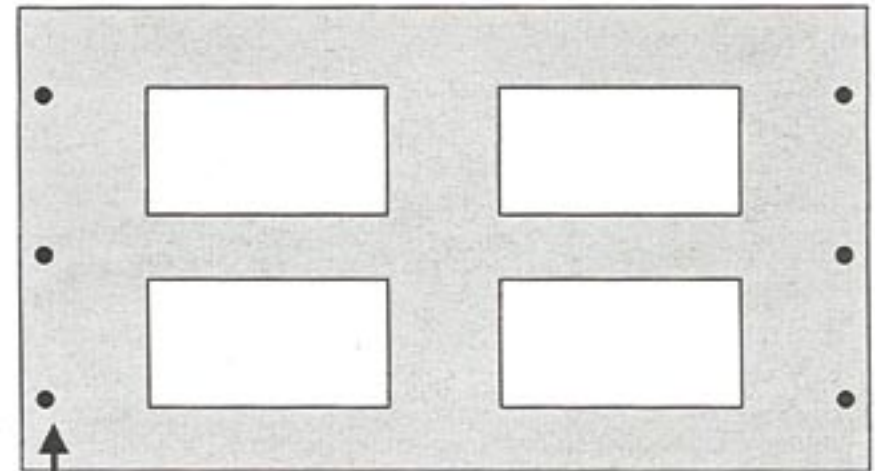
PLATEMAKING REQUIREMENTS

Supplied Film Negative



Use center round pin and oblong pin hole at opposite end when processing a press plate.

Press Plate



Do not use the two round pin holes from one end only. Vacuum process will cause the film to shift at opposite ends.



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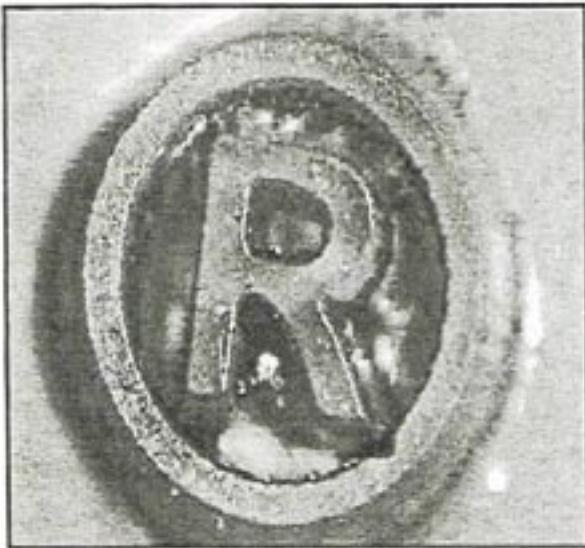
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READ THE PRESS PLATE

Good Quality



Above: the **good quality** magnified picture shows an accurate exposure, resulting in a sharp image.

Note the image height and sharp shoulder angle of the text.

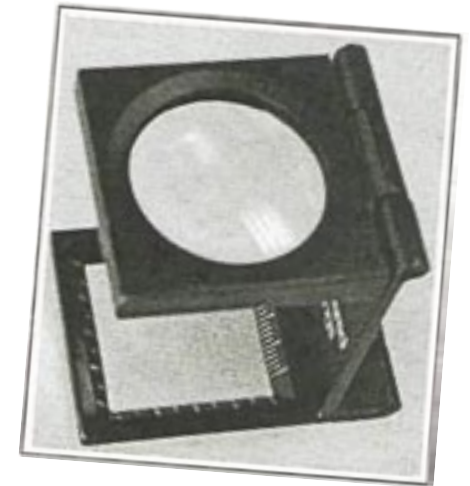
Poor Quality



Above: the **poor quality** over-exposed plate enlarges the image.

Combine this with decorator speed and pressures the image suffers from ink build-up and squash.

The result is a blurred and, in some cases, un-recognizable print.



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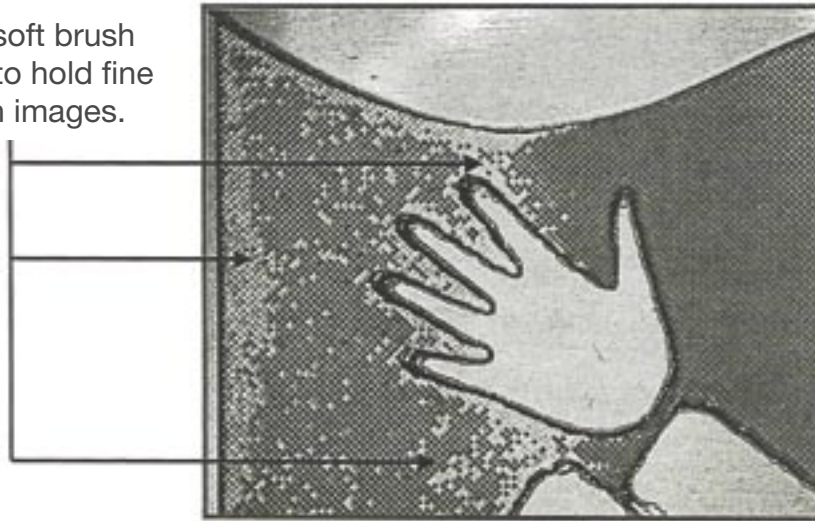
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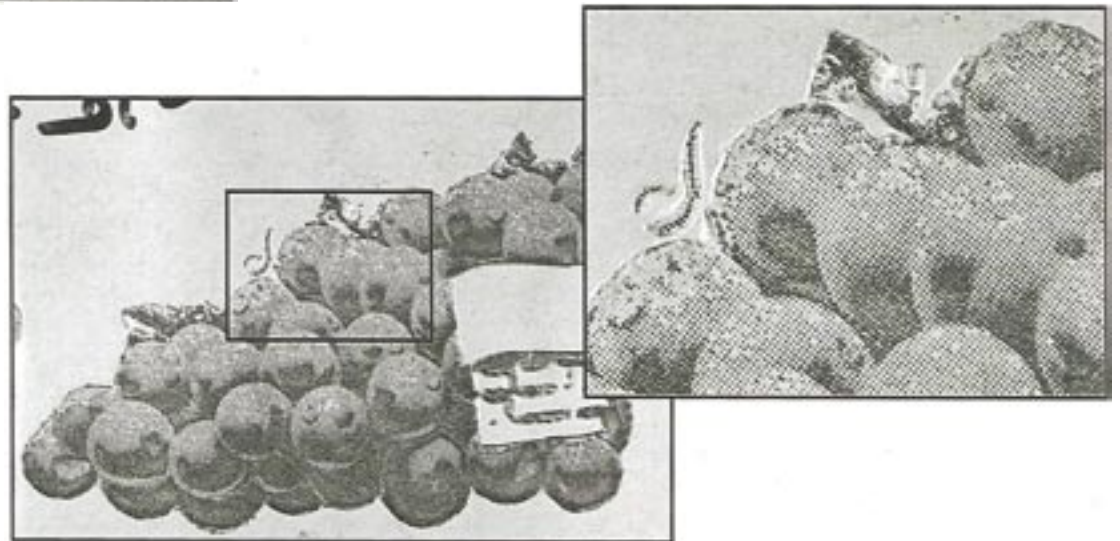
READ THE PRESS PLATE - MISSING SCREEN

Use a soft brush system to hold fine screen images.



Press plate under-exposed screen removed from plate during wash-out.

Press plate over-washed with temperature too high and under-dried.



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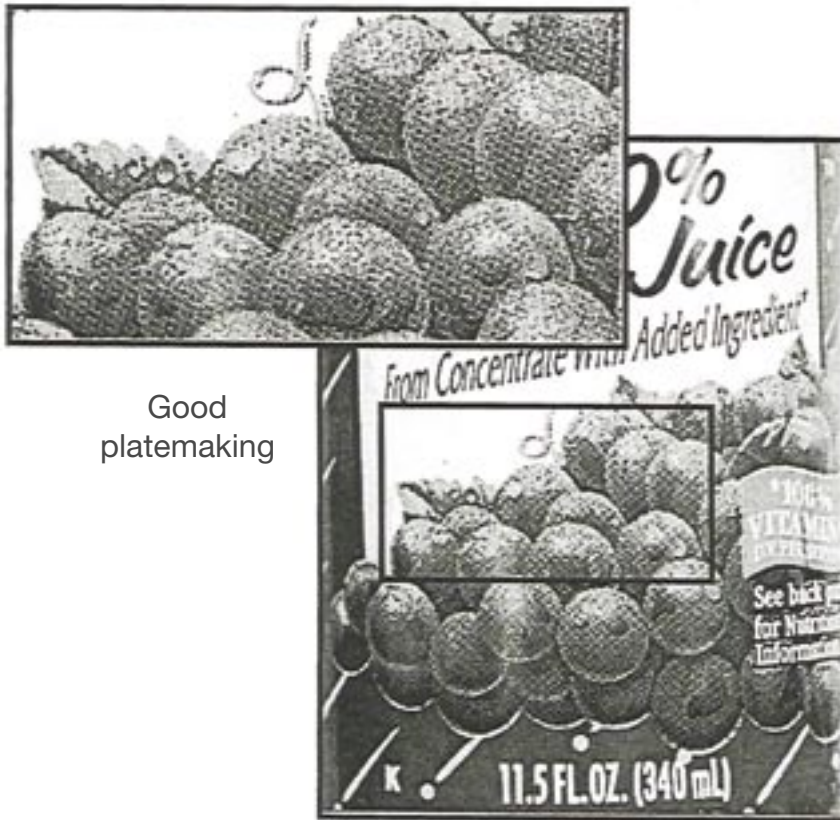
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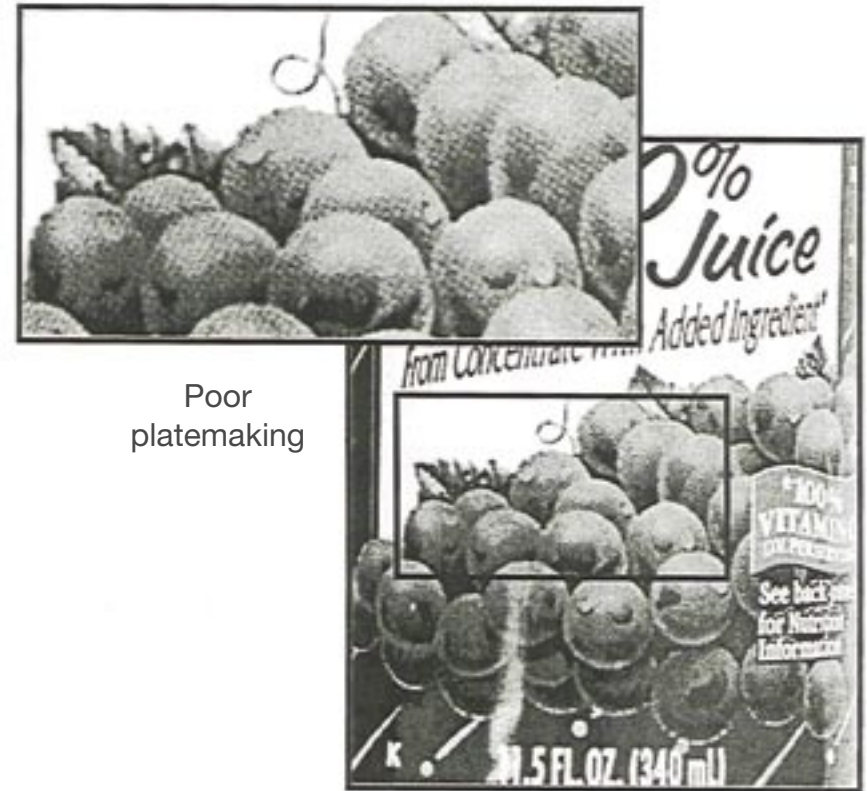
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READ THE PRESS PLATE - MISSING SCREEN

Press plate over-washed with temperature too high and under-dried.



Good
platemaking



Poor
platemaking



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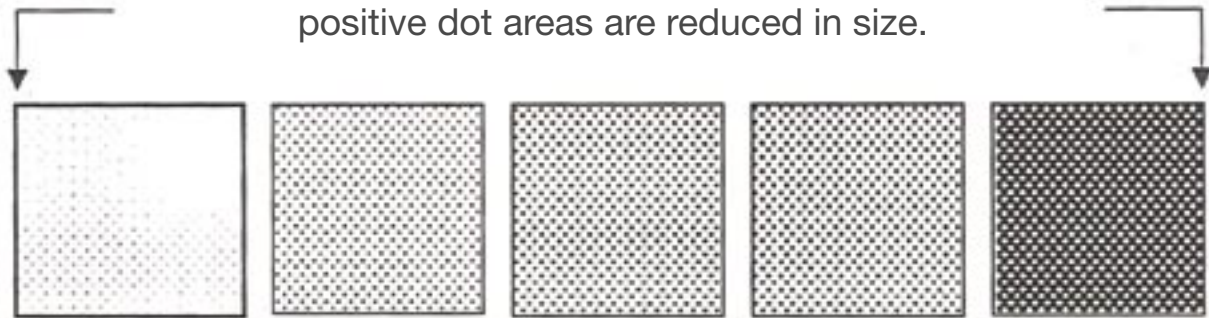
PLATEMAKING & PRINT PRESSURES

Note the change in screen value from light to dark

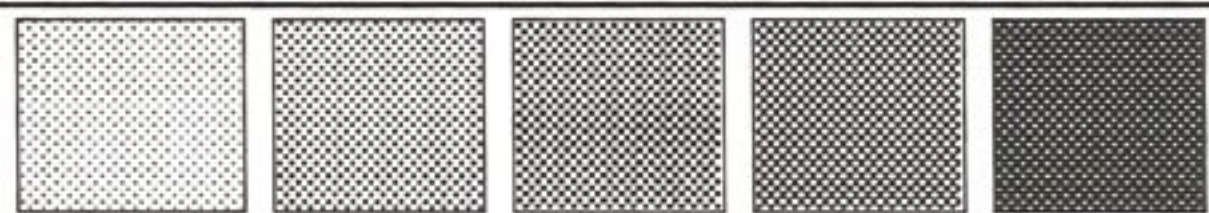
The reverse dot (shadow) areas are enlarged while the positive dot areas are reduced in size.

Customer-approved art
Result of:

- Under-exposed press plate
- Print pressures too light

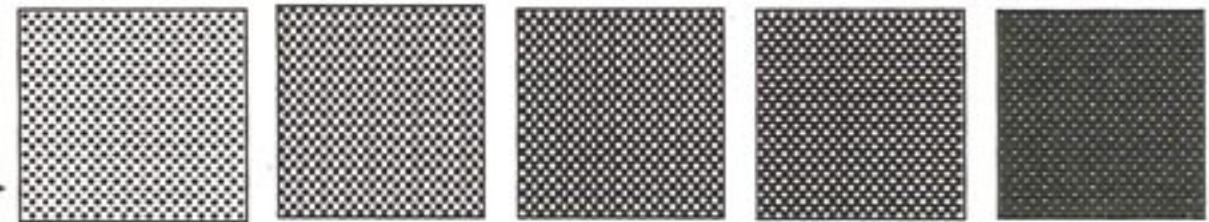


Customer-approved art
85 line screen



Customer-approved art
Result of:

- Over-exposed press plate
- Too much print pressure



The reverse dot (shadow) areas are filled in while the positive areas are enlarged.



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