

Phosphor Storage Plates (PSP): Wear Patterns

1. ***What are Phosphor Storage Plates composed of?***

PSPs are composed of several layers of different materials. Starting from the black side, they are:

- Base outer coating
- Black layer
- White layer
- Phosphor coating
- Top protective coating

2. ***What does normal wear on the black side of the PSP look like?***

The wear patterns have been described as lines, marks, scuffs, scratches, and shadowy streaks. These linear marks will appear lighter than the black rear surface. Over time the white material layer above the black coating may also become exposed.

3. ***What causes these marks?***

The wear patterns are created by the mechanism that moves the PSP through the scanning area of the machine. The PSP is transported by a series of traction belts that contact the same part of the PSP each time the PSP is read. Since both the PSP and traction belts are fixed in a position relative to one another, the wear pattern is cumulative, becoming more visible over time.

4. ***Do the wear patterns affect image quality?***

No. The image is captured by the front, or light-colored surface of the PSP. It is on this front side that the X-rays strike the phosphor coating. The black side plays no role in image capture

5. ***Is there anything I could be doing to care for my PSPs?***

Yes. Handle plates by the edges. Avoid situations where the front, light-colored side of the plate could be scratched. Use ScanX cleaning sheets to remove any particles or debris that may have entered the ScanX.