

DSS-M.04.04 | Mechanical Abrasion, Scoring, Impact & Cracking

Tool Strike / Ladder Foot Imprint

Mechanical - localized contact/press/drag imprint; may include abrasion + transfer

Diagnosis summary

A tool strike / ladder foot imprint is a localized contact mark on the exposed surface produced by pressed/dragged equipment (e.g., ladder feet, tool bodies, scaffold components). It may present as rectilinear pad outlines, paired tread prints, or blunted arcs consistent with press-and-slide. Classification is appearance-only per VIS (method-agnostic). Inspect under VIS lighting/geometry after Non-Invasive Reveal;

Field identification cues

- Surface-catch class (MSRT)
- Transfer only: typically SC-0 (no catch).
- Scuff/abrasion present: SC-1 (slight) up to SC-2 (clear) along leading edges or grit tracks. Perform one light, non-marring pass only; prefer polymer stylus on suspected coated faces; MSRT supports classification, not acceptance.
- Visual signature

Classification, severity and scope

- Assign CAT by appearance + MSRT + morphology (three-part cueing under VIS). Depth figures are indicative to anchor the spectrum:
- CAT-2 (Light): Transfer film with minimal micro-abrasion; SC-0 to SC-1; edges clean, no chip flanks; mainly a raking-only cue at close/standard view. Indicative depth: ~10-40 µm.
- CAT-3 (Moderate): Pronounced scuff with SC-2 (clear) along the lead; minor chip flanks / modeled micro-texture; noticeable at standard view. Indicative depth: ~40-120 µm.
- CAT-4 (Severe): Deep abrasion lane and/or peppered pits/craters from entrained grit; rough, bright flanks; clear at standard & wide-field views. Indicative depth: ~120-300 µm+.
- CAT-5 (by location/condition): Between-pane/inaccessible by parallax, or integrity indicators (active cracks, pane movement) → CAT-5 (out of in-place scope).

Distinguishing criteria

- vs. Rubber/plastic transfer (Residues R.05): If reveal removes the mark and MSRT = SC-0, classify as residue/transfer, not surface damage. Retain photos and reclassify per VIS.
- vs. Linear scoring (M.01): Scoring forms long, continuous lines/tracks; ladder/tool imprints are localized pad geometries with short directional scuff.
- vs. Hot-particle peppering (Th.01): Thermal peppering shows distributed fused nodules/pits, not pad geometry; classify under Th.01 when fielded.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique, include raking macros of the leading edge (to show chip-flank status) and at least one context frame showing pad/tread.
- MSRT result: Record SC class (SC-0/1/2) with one light, non-marring pass; polymer stylus on suspected coated faces. MSRT is supportive only.
- Forms: Pane ID; product family & surface numbering (#1-#4; laminate-internal); worked surface Y/N; functional coating present on worked surface?

Safety / repairability boundary: Complete only the non-invasive reveal and inspection steps authorized by the controlling VIS guidance. Classification does not authorize restoration, establish acceptance, or override stop-work, coating, crack, integrity, access, chemical, fall-protection, or project-specific requirements.

Full DSS publication: use the catalog download. Web specification:

<https://a7df714357.nxcli.io/learning-center/resource-center/damage-specification-standards/dss-m-04-04-tool-strike-ladder-foot-imprint/>