

DSS-M.07.01 | Mechanical Abrasion, Scoring, Impact & Cracking

Edge-Origin Stress Crack (chip origin)

Mechanical - fracture initiating at edge/arris or at an edge chip

Diagnosis summary

An edge-origin stress crack is a through-thickness (or developing) crack that initiates at the edge/arris-often from a pre-existing edge chip ("origin chip")-and propagates inward under mechanical or handling stress. Any confirmed crack is an integrity indicator and lies out of in-place restoration scope under VIS (CAT-5 by condition/location). Classification is appearance-only; methodology is out of scope.

Field identification cues

- Surface-catch class (MSRT)
- Do not pass a stylus across any suspected crack. If needed, a single light, non-marring pass adjacent to the origin chip may be used to sense local relief from chip facets (context only).
- Visual signature
- Unbroken, hairline fissure that can pass across faint surface texture without interruption; may display branching or feathering away from an edge chip origin.

Classification, severity and scope

- Assign category by appearance + integrity:
- CAT-5 (default): Any confirmed crack (edge-origin) → Non-Repairable / Out of In-Place Scope.
- Reassign only if no crack is present:
- If examination shows no fissure and only edge micro-chips/spalls → classify under M.03.01 / M.03.02 / M.03.03 as appropriate.
- If the cue is a linear surface scratch (abrasive, chip-flank sparkle, MSRT catch) without crack characteristics → classify under M.01 Linear scoring.

Distinguishing criteria

- vs. Edge micro-chipping/spall: Chips have faceted, sparkly flanks and are discrete; cracks are continuous, filament-thin and lack abrasive sparkle.
- vs.
- vs. Surface score: Scores exhibit MSRT catch and abrasive edges; cracks may pass through slight residues/texture without interruption and can show branching.

Documentation and inspection

- Photo set (VIS): 12 / 36 / 72 in, normal + oblique, include raking macros that show the origin (edge or origin chip) and continuous fissure.
- MSRT note. If recorded, note adjacent SC-class only (do not cross the crack). One light, non-marring pass; polymer stylus if coating is suspected.
- Forms: Pane ID; surface numbering (#1-#4; laminate-internal); worked surface Y/N; functional coating 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-07-01-edge-origin-stress-crack-chip-origin/>