



DSS-M.07.03 | Mechanical Abrasion, Scoring, Impact & Cracking

Fragmentation Pattern (tempered fracture documentation)

Mechanical / integrity - safety glass “dice” pattern; out-of-scope for in-place restoration

Diagnosis summary

A fragmentation pattern documents the post-break state of a fully tempered (or heat-strengthened) lite that has fractured. Tempered fracture produces characteristic small, interlocking “dice”; heat-strengthened fracture produces larger, irregular islands with longer cracks. Any fractured lite is an integrity condition and is out of in-place restoration scope under VIS (CAT-5 by condition/location).

Field identification cues

- Do not perform MSRT on fractured glass. Treat the lite as unstable.
- Visual signature
- Tempered “dice”: dense, fine mosaic; difficult to trace a single crack long distance.
- Heat-strengthened: larger blocky islands; individual cracks run farther before turning.

Classification, severity and scope

- CAT-5 (default): Any fractured lite (tempered or heat-strengthened), regardless of fragment size or retention, is Non-Repairable / Out of In-Place Scope.
- Reassign only if unbroken: If re-inspection determines the pane is not fractured (e.g., a star-break in annealed/laminated without full fragmentation), classify under M.04.02 (impact star) or M.07.02.
- CAT is governed by integrity/location for cracks; acceptance is evaluated separately under VIS §6.

Distinguishing criteria

- vs. Annealed/laminated star break: Star/bullseye presents radial arms/rings without full “dice” mosaic. If only cracked (not fully fragmented), use M.04.02 / M.07.02 (still CAT-5).
- vs. Patterned privacy/etched glass: Decorative patterns can mimic a network from afar; raking light and touchless close visual confirm whether it’s a crack mesh vs. a surface pattern.
- vs. Surface films/residues: Films do not form polygonal, interlocking boundaries; a mosaic with edge lift or loose granules indicates fracture.

Documentation and inspection

- Safety & stabilization note. Confirm that the area is barricaded or the lite is secured per site protocol prior to close documentation.
- Photo set (VIS):
- Overall: 72 in and 36 in, normal incidence, capturing the full pane and adjacent framing/hardware.

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-07-03-fragmentation-pattern-tempered-fracture-documentation/>