SCRATCH MARKS — 4 TYPES, 1 LOOK

Classify in 3 seconds. Find the roller in 10 minutes.

TYPE	WHAT YOU SEE	DEPTH	LIKELY CAUSE
1. Surface Scuff	Light haze, visible only under torch at angle	Aluminium disturbed PET intact	Soft contact (dust, tape)
2. Deep Scratch	Clear line exposing shiny PET underneath	Aluminium fully removed	Hard edge (blade, burr)
3. Repeating Pattern	Lines at fixed spacing along length	Matches roller circumference	Defect stuck on roller
4. Random Scattered	Short lines in unpredictable positions	No repeating pattern	Contamination pickup

6-STATION DETECTIVE WALK (Rewinder → Upstream)

1. **UNWINDER** — Guide rollers, dancer arm — check for dust, tape residue, burrs
2. **CHILL DRUM** — Surface + edge tape — check aluminium pickup, curled tape edges
3. **DTR/DRAW** — Rubber coating — check embedded particles, hardness patches
4. **REWINDER** — Lay-on nip + spreader — check worn bow roller, nip contamination
5. **SLITTER PATH** — All idler rollers, spreader bars — check dust build-up, sleeve damage
6. **SLITTER NIP** — Rubber nip roller — check hard particles embedded, surface glazing

■ GOLDEN RULE: START AT REWINDER, WALK UPSTREAM
The scratch is produced by the most downstream offender. Never start at unwinder.