METAL ROOF INSPECTION CHECKLIST

This is an inspection checklist for a commercial metal roof, standing seam or through fastened. It is organized by joint and fixing rather than by area, because that is how metal roofs fail.

Work along the lines: eaves, then laps, then fasteners, then penetrations, then ridge and terminations, then inside.

BEFORE YOU GO UP

A metal roof is a fall risk and a fragile roof risk at the same time. Step over purlin lines, never on a rooflight, and never on a panel of unknown age or gauge.

Take a camera, a roof plan with the purlin lines and rooflights marked, and binoculars for anything you should not walk to.

THE FASTENERS

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Fastener heads	Standing proud, backed out, overdriven into the panel
☐ Washers	Split, hardened, flattened, squeezed out or missing
☐ Rust staining	A ring around a head, or a run down the panel below it
☐ Hole condition	Wallowed or oversized, so the fastener no longer seals
☐ Patterns along a line	Several failures following a purlin run
☐ Missing fasteners	Empty holes, or a fixing replaced by sealant

THE LAPS

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ End laps	Opened, lifted, sealant squeezed out or absent
☐ Side laps	Gaps, daylight, a lap that has lifted along its length
☐ Lap sealant	Hardened, cracked, shrunken or never present
☐ Capillary action marks	Staining running back up a lap against the fall
☐ Seam condition on standing seam	Seams unclipped, rolled open, distorted
☐ Distortion and oil canning	Panels buckled, which usually indicates restraint

THE PENETRATIONS

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Pipe and cable penetrations	Mastic as the only detail, a collar standing away
☐ Later additions	Anything cut in after the roof, with no proper flashing
☐ Curbs and units	Flashings slipped, upstands too low, fixings through the pan
☐ Rooflights	Crazed, cracked, flashing lifted, fixings corroded
☐ Vents and extracts	Loose, corroded at the base, sealant failed
☐ Snow guards and fixings	Fixed through the panel without a detail

THE EDGES AND TERMINATIONS

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Ridge and hip	Fixings loose, filler blocks missing or degraded
☐ Verges and barge details	Lifted, corroded, fasteners pulled
☐ Eaves	Cut edge corrosion, panel ends distorted or lifted

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Gutters	Debris, standing water, corrosion, joints opened
☐ Abutments and upstands	Flashing short, sealant failed, no proper cover
☐ Valleys	Debris, ponding, corrosion, inadequate upstand

THE CORROSION

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Cut edges	Rust at verges, eaves and anywhere panels were cut
☐ Around fasteners	Water sitting at the head, rust spreading from it
☐ At laps	Corrosion between two surfaces, often invisible from above
☐ Coating condition	Chalking, fading, flaking, loss of film at high points
☐ Dissimilar metals	Copper, lead or steel in contact with the panel
☐ Panel undersides, from inside	Condensation driven corrosion, not a rain problem

INSIDE THE BUILDING

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Daylight through the roof	Visible at laps, fasteners and rooflights with lights off
☐ Purlins and structure	Rust runs, staining, water tracking along a member
☐ Panel undersides	Corrosion, condensation, staining around fixings
☐ Insulation	Damp, compressed, sagging, displaced
☐ Ceilings and finishes below	Stains, including old ones that have been painted over

WHAT TO DO WITH IT

1. **Work along lines, not across areas.** Metal roofs fail at joints and fixings.

2. **Count the failed fasteners by area.** The count decides the scope of the repair.
3. **Look for patterns, not just defects.** A line of failures means movement.
4. **Inspect from inside as well.** Underside corrosion is invisible from above.
5. **Use a drone where walking is unsafe.** Most of what matters is visible from just above.

Want the reasoning behind these checks? Read what an inspection covers and the inspection methods.

Walked by _____ Date _____ Roof _____