

Foreign Object Debris (FOD)

Knowledge card — earned on successful completion of CertiFlyers Course 1

Anything you can't account for is FOD until proven otherwise.

Clean as you go and account for every item, match the post-maintenance check to the zone, and stop, report and document the moment FOD is found.

THE THREE RULES

1 Clean as you go, account for everything
Survey the zone for debris and loose hardware before you start, and inventory every tool and consumable you bring in. Contain hardware on magnetic mats, in spill-proof totes and on shadow boards. Remove safety wire clippings, packaging and rags the moment they are generated — not at the end of the shift.

2 Match the check to the zone
Non-Critical (passenger cabin, external fairings that enclose no mechanisms or systems): basic visual inspection and standard sweeping or vacuuming. Sensitive (wheel wells, secondary control surfaces): enhanced visual inspection, magnetic sweep, final tool accounting. Critical (engine bays, flight control mechanisms): borescope exam of internal cavities, torque seal audit after engine work, step-by-step checklist for fastener integrity. No panel closes until 100% accountability is declared.

3 Find FOD? Stop, leave it, report
The moment an unaccounted object turns up, halt all maintenance activity. Do not remove it unless it poses an immediate safety hazard. Notify the shift supervisor. Record the exact location, discovery method and nature of the part before any corrective action — it is forensic evidence. No work resumes until the zone is cleared.

NEVER

- ✗ Walk away from the aircraft with tools still on the component
- ✗ Let safety wire clippings, packaging or rags accumulate in the work zone
- ✗ Close a panel before 100% accountability of tools, hardware and consumables is confirmed
- ✗ Remove found FOD before it is documented — unless it is an immediate hazard

ALWAYS

- ✓ Survey the zone for debris and loose hardware before you start
- ✓ Contain hardware on magnetic mats, in spill-proof totes and on shadow boards
- ✓ Return every tool to its designated location and account for every item brought in
- ✓ Report and document every FOD find, however minor the damage

NUMBERS TO REMEMBER

AS9146

aerospace FOD prevention standard — tool and material accountability, Clean As You Go housekeeping

150/5210-24A

FAA AC (2024): advisory guidance for airport FOD programs — prevention, detection, removal, evaluation

100%

accountability of tools, hardware and consumables before any panel is sealed

3 zones

Critical, Sensitive, Non-Critical — match the inspection method to the zone

2017

Metroliner — mechanic called away, screwdriver left in the wiper area

109 + 4

Concorde 2000 — perished aboard and on the ground; runway metal strip

BEFORE CLOSING UP — CHECK

- | | |
|--|--|
| ☐ All tools, hardware and consumables brought in accounted for — 100% | ☐ Safety wire clippings, packaging and rags removed from the zone |
| ☐ Tools returned to their designated locations — shadow board complete | ☐ Zone classified — Critical, Sensitive or Non-Critical — matching check done |
| ☐ Critical zone? Borescope exam, torque seal audit, fastener checklist complete | ☐ Self-check: did familiarity with the task make you overlook a detail? |

M1 Fundamentals of FOD and Human Factors **M2** FOD Prevention in the Maintenance Environment

M3 Post-Maintenance Zone Verification and Incident Response

Regulatory basis: Aerospace Standard AS9146 · FAA Advisory Circular 150/5210-24A · ICAO PANS-Aerodromes (Doc 9981)

CertiFlyers Hangar Card series · Card No. 01 of the course catalogue · Print on Letter or A4, display in the hangar · Summarises Course 1; it does not replace the approved technical data or the maintenance manual.