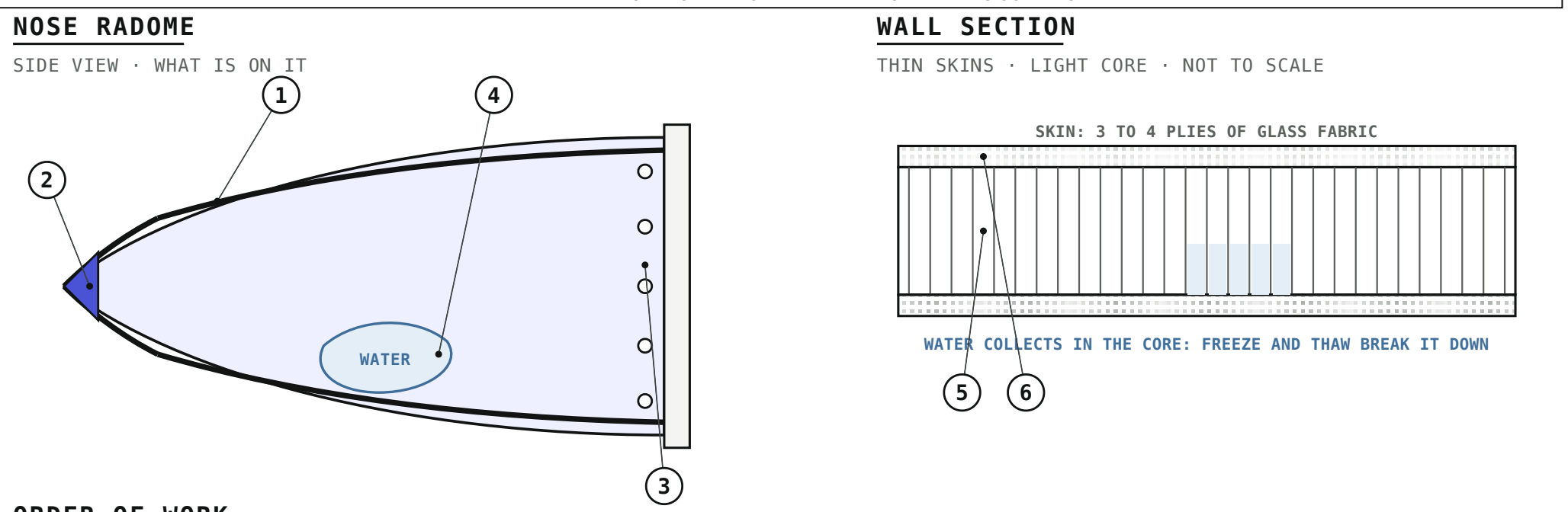
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Radome Repair: Moisture, Transmission and What Changes from Structure

Radome · water in the core · what changes · order of work

1 Identification

REFERENCE DRAWING — NOT APPROVED DATA · THE SRM ALWAYS GOVERNS



ORDER OF WORK

EACH STEP NEEDS THE ONE BEFORE

INSPECT → FIND WATER → DRY → REPAIR → TRANSMISSION TEST → APPROVED PAINT

Water and moisture: x-ray, infrared thermography or a radome moisture meter (RF power loss).
After the repair a transmissivity test shows the radar signal passes (H 7-40).

PARTS LIST

#	PART	NOTE	SOURCE
1	Lightning strips	Bonded on the outside; high resistance and lifting are the usual faults	H 7-40, 7-41
2	Erosion cap	Neoprene cap on the nose: inspect	AC 12-26
3	Attach fittings	Fittings and fastenings: inspect	AC 12-26
4	Water in the core	Shadow on the radar image; degraded radar performance	H 7-40
5	Core and skins	Honeycomb sandwich, thin skins so they do not block the signal	H 7-40
6	Outer skin and paint	Approved paint only, so signals pass unobstructed	H 11-62

NOTES

1. Dimensions in inches. Do not scale: the SRM sets the values.
2. For reference. The applicable manual always governs.
3. Based on FAA-H-8083-31B, AC 43.13-1B.

REVISIONS

REV	DESCRIPTION	YEAR
A	First issue	2026

The Aviation Point.	Structural repair reference		
TITLE: Radome repair			
DRAWING NO.: TAP-DWG-149	REV: A · 2026	SCALE: NTS	SHEET: 1 OF 1
APPLIES TO: Nose radome			
DO NOT SCALE DRAWING			

Radome, wall, order of work and parts list, after FAA-H-8083-31B pp. 7-40, 7-41 and 11-62 and AC 43.13-1B pars 3-1a, 3-11 and 12-26.

What changes compared with structure

Item	Structure	Radome
What the repair must preserve	Strength, weight and stiffness	The strength and the electrical properties: materials must preserve both (AC 3-1a)
The skin	As thick as the load needs	Thin on purpose, three or four plies, so it does not block the signal (H p. 7-40)
Water in the core	Dried before repair: it boils in the cure and disbonds the skin	A radar fault as well: it can shade the radar image and severely degrade the radar (H p. 7-40)
Paint	Corrosion and appearance	Approved paint only, so signals pass unobstructed (H p. 11-62)
Lightning	A conductive layer or the metal skin carries it away	Strips on the outside and fittings carry it; strips in poor condition endanger the radome (H p. 7-41)
Ordinary fiberglass repairs	Available for fairings, covers and cowlings	The AC says those fiberglass repairs are not to be used on radomes (AC 3-2 note)
Proof after the repair	Inspection, tap, balance on a control	A transmissivity test, so the signal passes (H p. 7-40)

 Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.

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2 Allowable damage

What you find, and what to do

Finding	What the sources say	Source
Water in the core, soft spot	Repair quickly to avoid further damage and signal obstruction; dry before repair	H 7-40
Disbond or delamination after a low-impact hit	Repair like other honeycomb sandwich, mindful that a repair can change the radar performance	H 7-40
Holes, cracks, chipping, peeling paint	Found on the visual check; repair to the radome manual	AC 12-26
Strip with high resistance or lifting	Repair the strip or its hardware: a strip in poor condition risks damage to the radome	H 7-41
Erosion cap or fitting damaged	Inspect and replace as the manual says	AC 12-26
How big a damage can stay, how many repairs are allowed	—: the radome manual sets the limit; no generic figure is published	SRM

3 Repair

1. Inspect the surface, fittings, caps and strips.
2. Find water: x-ray, thermography or moisture meter.
3. Dry the part.
4. Repair with the radome's own materials.
5. Transmissivity test.
6. Seal edges; approved paint; check strips.

Key points

- **Electronic window:** three or four plies of glass over honeycomb, thin so the signal passes.
- **Water in the core** degrades the radar and breaks the honeycomb down: x-ray, thermography or a moisture meter.
- **Materials** must preserve strength and electrical properties; ordinary fiberglass repairs are not for radomes.
- **Approved paint only;** edges sealed.
- **Transmissivity test** after the repair; strips checked for resistance and lift.
- **No generic limits:** damage size, plies and transmission loss are in the radome manual.

MAIN SOURCES · FAA-H-8083-31B, Aviation Maintenance Technician Handbook: Airframe, Chapter 7 · AC 43.13-1B, Change 1, Acceptable Methods, Techniques, and Practices: Aircraft Inspection and Repair · FAA Composite Structural Engineering Technology Safety Awareness Course, DOT/FAA/TC-21/35 · T.O. 1-1A-1 / NAVAIR 01-1A-1, Engineering Handbook Series for Aircraft Repair: Structural Hardware and Composites · EASA AMC 20-29, Composite Aircraft Structure · 14 CFR 25.581, Lightning protection

SCAN · OPEN THIS GUIDE
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