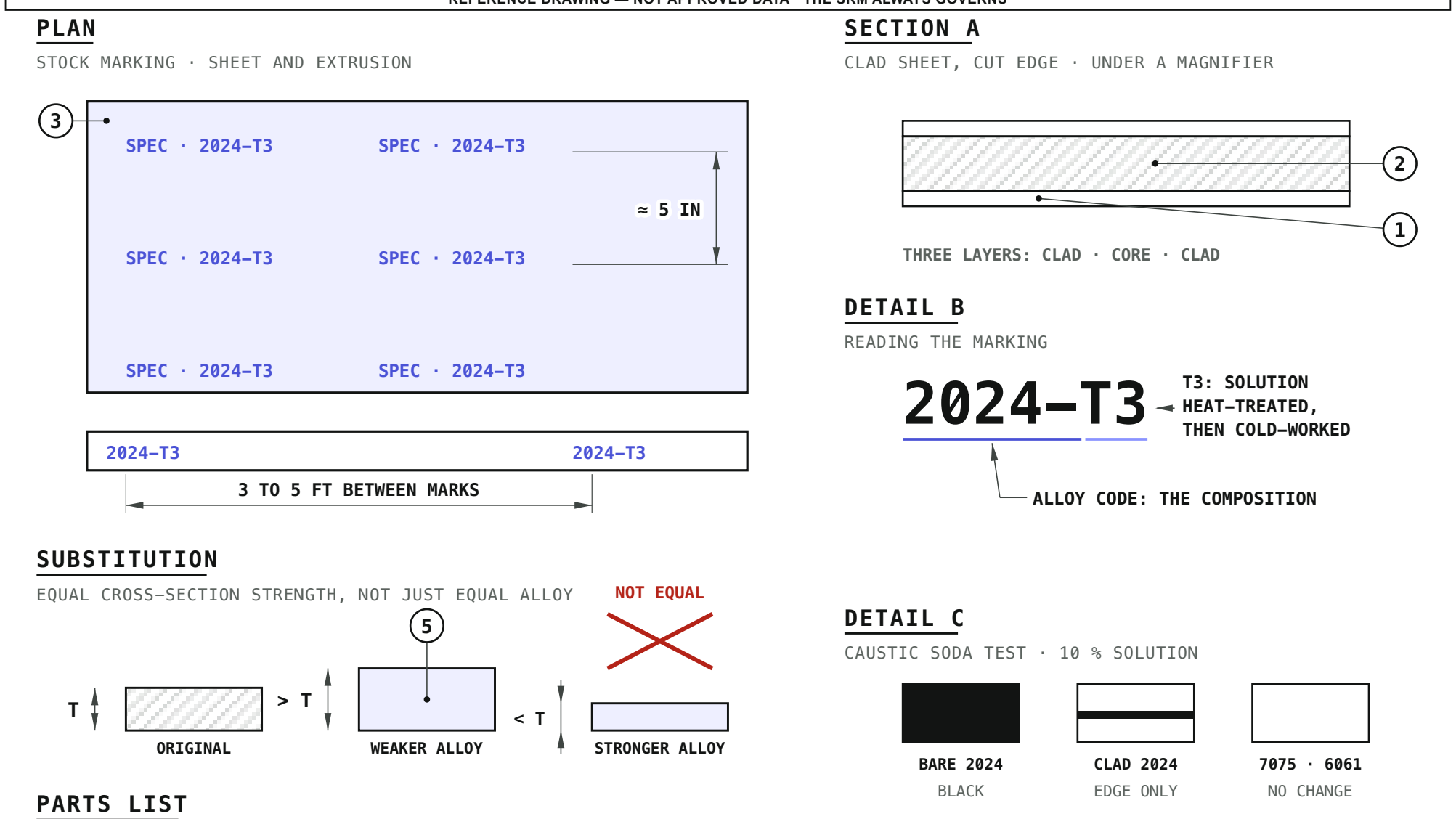
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Identifying and Substituting Aluminium Sheet

Marking · temper · clad · substitution

REFERENCE DRAWING — NOT APPROVED DATA · THE SRM ALWAYS GOVERNS



PARTS LIST

#	ITEM	RULE	SOURCE
1	Cladding	Pure aluminium or corrosion-resistant alloy on the faces	AC 43.13-1B 4-23a
2	Core	The structural alloy; shows as the middle layer at the edge	AC 4-23a
3	Marking	Spec no., temper or code; rows ≈ 5 in; extrusions 3 to 5 ft	AC 4-4; HB p. 4-30
4	Temper	Letter and digits after the alloy: O, H, T and their subdivisions	AC Table 4-4
5	Replacement	Weaker alloy: heavier gauge; stronger and thinner is not equal	HB p. 4-87
6	Caustic test	Copper alloys 2014, 2017, 2024 turn black; no change proves nothing	AC 4-23b

NOTES
1. Dimensions in inches. Do not scale: the SRM sets the values.
2. For reference. The applicable manual always governs.
3. Based on AC 43.13-1B ch. 4.

REVISIONS

REV	DESCRIPTION	DATE
A	First issue	2026-10-30

The Aviation Point. Structural repair reference

TITLE: Material identification			
DRAWING NO.: TAP-DWG-033	REV: A	SCALE: NTS	SHEET: 1 OF 1
APPLIES TO: Aluminium sheet			
DO NOT SCALE DRAWING			

After AC 43.13-1B pars. 4-4 and 4-23, Table 4-4, and FAA-H-8083-31A pp. 4-30 and 4-87. Typical only: the part's drawing and the SRM govern the material.

The tempers you will see

Mark	Meaning
-O	Annealed, the softest temper
-H1x, H3x	Strain-hardened (H1 only; H3 and then stabilised); the digit after gives the hardness, such as H14 half-hard
-T3	Solution heat-treated and cold-worked by flattening or straightening
-T4	Solution heat-treated
-T6	Solution heat-treated and artificially aged
-T351, -T651	Heat-treated and stress-relieved by stretching 1 to 3 percent (T651 also aged)
-F	As fabricated; no mechanical-property limits

Key points

- **Sheet marked** every ≈ 5 in; extrusions every 3 to 5 ft.
- **2024-T3:** alloy 2024, solution heat-treated and cold-worked.
- **Clad** shows three layers at the edge; clad repairs clad.
- **Weaker alloy** needs a heavier gauge; stronger and thinner is not equal.
- **The SRM** gives the permitted substitute.

Step by step

1. Read the mark; copy it before cutting.
2. Compare it with the drawing and the SRM.
3. If unmarked, identify it by analysis.
4. Pick the substitute from the SRM only.
5. Record any substitution as major repair data.

SOURCES · FAA AC 43.13-1B CHG 1, Chapter 4 · FAA-H-8083-31A, AMT Handbook — Airframe, Volume 1, Chapter 4

SCAN · OPEN THIS GUIDE
theaviationpoint.com/sheet-metal/material-id/

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