THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT

The Aviation Point.

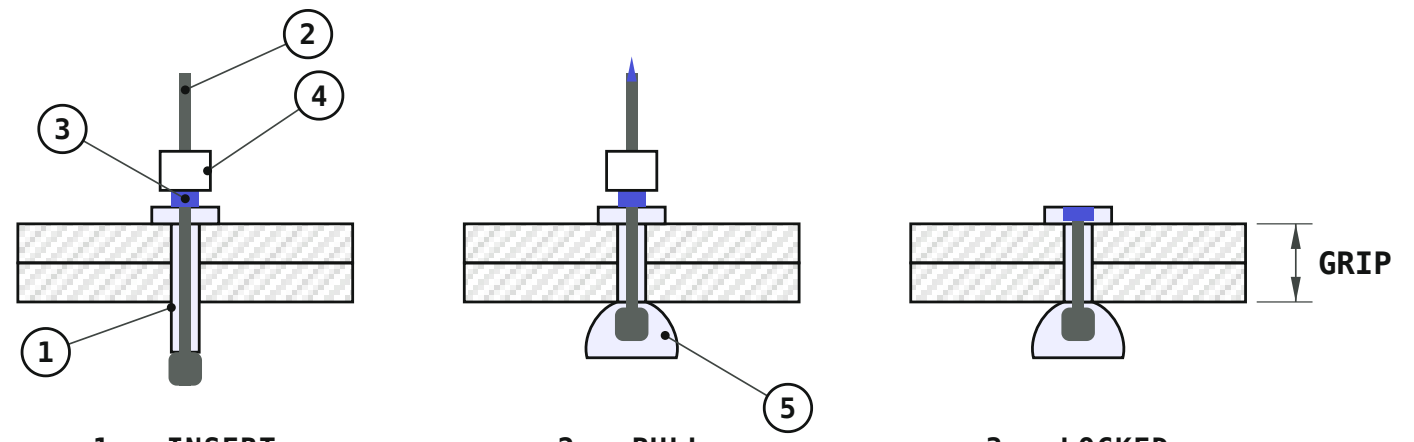
Blind Rivets in Repairs: Where They Are Allowed, and How to Check Them

Where they go · where they do not · types · checks · removal

REFERENCE DRAWING — NOT APPROVED DATA · THE SRM ALWAYS GOVERNS

INSTALLATION · THREE STEPS

MECHANICAL-LOCK BLIND RIVET · SECTION · SCHEMATIC



1 · INSERT — Pulling head over the stem; firm pressure seats the head.

2 · PULL — The stem upsets the sleeve and forms the bulbed head.

3 · LOCKED — Collar fills the head recess; stem breaks at its notch.

PARTS LIST

#	PART
1	Rivet sleeve
2	Pulling stem
3	Locking collar
4	Driving anvil
5	Bulbed blind head

After the Handbook's CherryMAX figures. Other makes differ in detail.

BEFORE YOU PICK ONE

THREE QUESTIONS, IN ORDER

1. Can a solid rivet be driven here? — YES: use the solid rivet. NO →
2. Is it a prohibited area? (see the table) — YES: no blind rivet. NO →
3. Is it a metal repair to the airframe? — YES: manufacturer's authorization or FAA approval

All NO: install to the manufacturer's data

FRICTION-LOCK AND MECHANICAL-LOCK

	FRICTION-LOCK	MECHANICAL-LOCK
Stem held by	Friction only	Lock ring or collar
In vibration	Stem can fall out	Stem stays locked
Inspection	Visual; loose shows as a smoking rivet	Collar visible; stem broken at the notch
Removal	Punch out the stem, then as a solid rivet	Drill the stem, remove lock, punch, drill sleeve

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 par. 4-57.

REVISIONS

REV	DESCRIPTION	DATE
A	First issue	2026-10-30

The Aviation Point.	Structural repair reference		
TITLE: Blind fasteners			
DRAWING NO.: TAP-DWG-007	REV: A	SCALE: NTS	SHEET: 1 OF 1
APPLIES TO: Aluminium sheet repairs			
DO NOT SCALE DRAWING			

After FAA-H-8083-31A Vol. 1 pp. 4-47 to 4-50 (Figs. 4-102 and 4-103) and AC 43.13-1B par. 4-57f. Schematic only: each manufacturer's installation data governs.

Where a blind rivet may not be used

Place	AC 43.13-1B par. 4-57f
Fluid-tight areas	“in fluid-tight areas”
Engine air intakes	“air intake areas where rivet parts may be ingested by the engine”
Flight controls	“control surfaces, hinges, hinge brackets, flight control actuating systems”
Main fittings	“wing attachment fittings, landing gear fittings”
Floats and hulls	“floats or amphibian hulls below the water level”
Anywhere else loaded hard	“other heavily-stressed locations on the aircraft”

Friction-lock against mechanical-lock

	Friction-lock	Mechanical-lock
What holds the stem	Friction only; the stem is drawn into the sleeve and breaks at a groove	A lock ring or collar locks the stem to the sleeve
In vibration	Many centre stems fall out, which greatly cuts shear strength	Made to stop exactly that loss
Where it is used	Mostly nonstructural; some, such as nutplates in hard-to-reach spots	The family that can replace a solid rivet size for size (CherryMAX, Cherrylock)
Inspection	Visual; a loose rivet shows the “smoking rivet” pattern	Visible collar; stem broken at its notch
Removal	Punch out the stem, then treat as any rivet	Destroy the lock first, drive the stem out, then drill out the sleeve

Key points

- **Usually not used** where a driven rivet can be installed (AC 43.13-1B par. 4-57f).

Step by step

1. Confirm authorization and that the place is not prohibited.
2. Measure the stack; choose the grip from the manufacturer's data.

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

THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM

- **Metal airframe repairs:** the airframe manufacturer must authorize the blind rivet, or an FAA representative approve it.
- **Substitution** only as the SRM or approved data allows; never where a few loose rivets would impair airworthiness.
- **Never file** the retained stem end of a CherryMAX or Cherrylock.

3. Pick the pulling head for the riveter.
4. Install; check clamp-up, collar and the broken stem.
5. Remove: destroy the lock, drive out the stem, drill the sleeve.

SOURCES · FAA AC 43.13-1B CHG 1, Chapter 4, par. 4-57; Chapter 7, par. 7-2j · FAA-H-8083-31A, AMT Handbook: Airframe, Volume 1, Chapter 4

SCAN · OPEN THIS GUIDE
theaviationpoint.com/sheet-metal/blind-fasteners/

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

THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM