

The FAA 25-Hour CVR Mandate: What It Requires

Two separate obligations, often confused: a forward-fit rule that binds at build, and a statutory retrofit deadline for the in-service fleet.

THE MANDATE AT A GLANCE

RETROFIT DEADLINE 16 May 2030 in-service covered aircraft	FLEET IN SCOPE 23,273 CVR-equipped aircraft, FAA estimate	RECORDING DURATION 2 → 25 hr TSO-C123a → TSO-C123c	TIME REMAINING <4 years to the retrofit deadline
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WHAT CHANGES ON THE AIRCRAFT

2 HOURS TODAY → 25 HOURS REQUIRED (TSO-C123a baseline vs TSO-C123c, EUROCAE ED-112A)			
TODAY	2 h	23 hours not retained — overwritten in flight	2 h
REQUIRED	2 h	+ 23 hours — the same 2 hours, plus a full duty cycle of cockpit audio and datalink	25 h
Everything a legacy recorder holds is the first 2 hours of what a compliant recorder must retain.			

WHO MUST COMPLY, AND WHEN

ALREADY BUILT · COVERED AIRCRAFT Retrofit by 2030 Aircraft operated by an air carrier under Part 121, and transport category types certificated with 30 or more passenger seats — including all-cargo and combi derivatives. Statutory, not discretionary. The FAA implementing rule is expected in 2027; the deadline is already fixed in law. FAA Reauthorization Act of 2024, Pub. L. 118-63 §366 — six years from enactment, 16 May 2030.	ALREADY BUILT · ALL OTHERS No retrofit duty Parts 91, 125 and 135 aircraft below the covered-aircraft threshold keep their existing 2-hour CVR. The FAA declined to mandate retrofit in the February 2026 rule. Upgrade is voluntary — best taken at a scheduled check. The FAA cited retrofit cost — roughly six times the cost of installing at build — as its reason for proceeding with forward fit only.	NEWLY MANUFACTURED Forward fit, in force Applies at build, by date of manufacture, in three tiers: 16 May 2025 2 Feb 2027 2 Feb 2029 Part 121 and transport category, 30+ passenger seats Parts 91/125/135, MCTOW ≥ 59,525 lb, ≤ 29 seats Parts 91/125/135, MCTOW ≤ 59,524 lb Final rule 91 FR 4447, effective 2 Feb 2026, amending 14 CFR 91.609, 121.359, 125.227 and 135.151.
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WHAT A COMPLIANT RECORDER MUST PROVIDE

Recording duration 25 HOURS The last 25 hours of cockpit audio retained continuously. A 2-hour recorder no longer qualifies at build, and from 2030 no longer qualifies in service on covered aircraft.	Standard TSO-C123C The rule names it explicitly — “TSO-C123c ... or any later revision”, replacing the TSO-C123a baseline. Check the recorder’s TSO authorisation, not just its stated duration.	Audio channels ED-112A Four channels to EUROCAE ED-112A, with the cockpit area microphone channel at 150–6,000 Hz and the remaining channels at 150–3,500 Hz.
Independent power TSO-C155B Where a recorder independent power supply is required, it must sustain recording for 10 minutes after loss of aircraft power. Internal or a separate LRU — the latter adds tray, harness and load-case work.	Datalink TSO-C177A On datalink-equipped aircraft, CPDLC messages must be recorded for the same 25-hour period and correlated to the audio timeline.	Survivability TSO-C121B ULB ED-112A crash protection — 3,400 G impact, 1,100 °C for 60 minutes, 20,000 ft hydrostatic, 30-day immersion — plus a 90-day underwater locator beacon.

PLANNING A RETROFIT PROGRAMME

1 Survey the fleet Confirm which tails are covered aircraft. Record existing recorder part numbers, tray type and connector, 115 VAC or 28 VDC supply, whether a RIPS is already fitted, and the CAM and control panel fit.	2 Secure design approval STC or minor change through a Part 21 design organisation: installation drawings, EWIS and load analysis, weight and balance, ICA, and any AFM, AMM or MMEL impact.	3 Book equipment and slots Lead time is the binding constraint, not price. Around 23,000 aircraft compete for the same recorder production and the same hangar capacity inside a four-year window.	4 Embody and close out Fit at a scheduled check wherever possible. Ground test, records and CAMO update, ICA into the maintenance programme, return to service.
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WHY THE TIMING MATTERS

23,273 aircraft · four years · one supply chain	The FAA declined to mandate retrofit in this rule, but the statutory deadline stands regardless. Operators who plan against scheduled checks between now and 2030 absorb the work into existing downtime; those who wait compete for slots and risk aircraft on ground for a recorder .
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EIRTECH SCOPE

 Fleet applicability review

 Design approval via Eirtech DOA

 Installation drawings & ICA

 Weight & balance, EWIS

 Fleet campaign management

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¹ The 2030 retrofit obligation is set by statute, not by the February 2026 rule; the FAA states it is “proceeding only with forward fit in this rule” and that its implementing rulemaking for retrofit follows. This brief is equipment-neutral and does not recommend a particular recorder. Sources: 91 FR 4447, 25-Hour Cockpit Voice Recorder Requirement, New Aircraft Production (2 Feb 2026); FAA Reauthorization Act of 2024, Pub. L. 118-63 §366; EUROCAE ED-112A; FAA TSO-C123c, C155b, C177a, C121b. The 23,273 fleet figure is the FAA’s own regulatory evaluation estimate.