



EASA
European Aviation Safety Agency

ETSO workshop 2018

Future CS-ETSO update in support of RMT.0400 and RMT.0249

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Location of an Aircraft in Distress

➤ CAT.GEN.MPA.210 Location of an Aircraft in Distress

- In Commission Regulation (EU) 965/2012 on Air Operation
- Background: AF447, MH370
- Forward fit from 01/01/2021

➤ Different solutions requiring ETSO update or creation

- Automatic Deployable Flight Recorders (ADFR)
- ELT of type Distress Tracking
- High Rate Tracking + 121.5 MHz Homing Device

ETSO-(2)CXXX
ETSO-C123d
ETSO-C124d
ETSO-C176b
ETSO-C177b

ETSO-C126c

ETSO-(2)CYYY

- In CS-ETSO Amendment 15



ADFR – Shortcomings of current ETSOs

➤ Deployment

- Currently: 4 ETSOs for recorders
 - EUROCAE ED-112A, section 3 applies
- Deployment performance not defined
- Normal conditions: No deployment test
- Environmental conditions
 - No deployment test
 - Unintended deployment not addressed

➤ Embedded ELT:

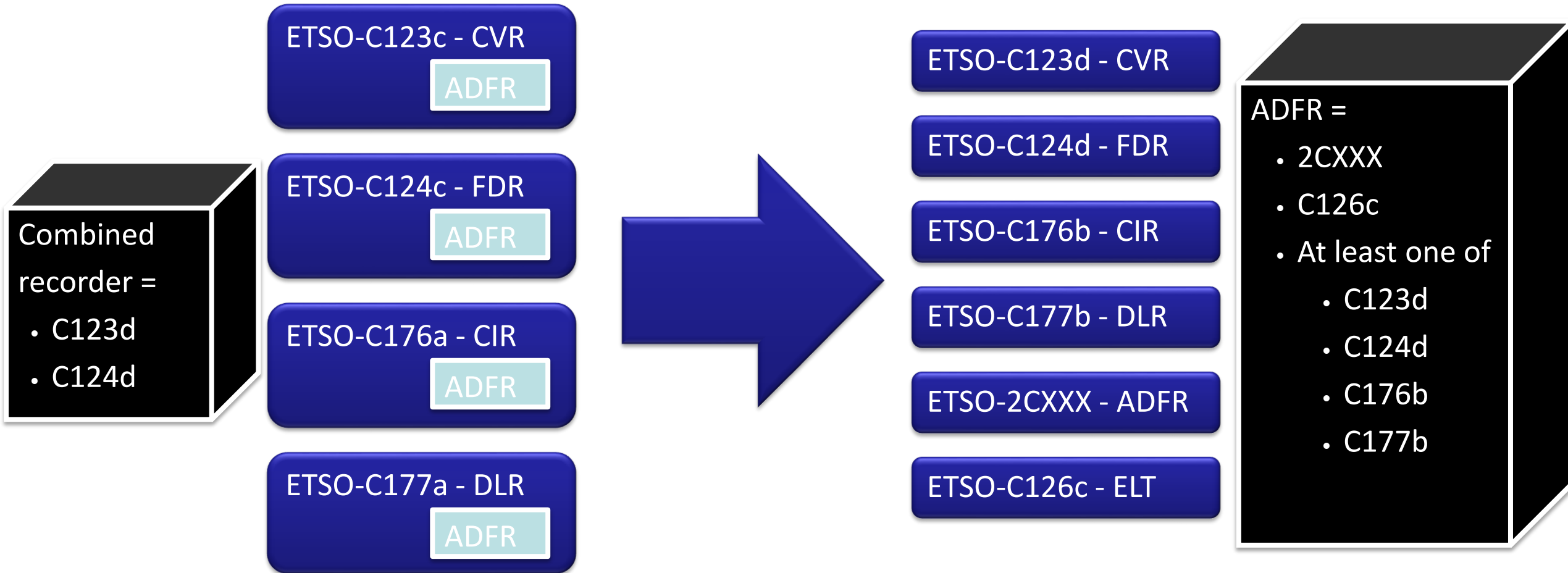
- Undefined type/performance
- Limited crash performance

➤ Installation aspects

- RMT.0249



ADFR - Proposed modifications - Structure





ADFR - Proposed modifications – ETSO-(2)CXXX

- Based on EUROCAE ED-112A sect. 3 « Deployable Recorders »
- Deployment performance
 - More accurately defined
 - Minimum performance
 - Consistent with the test conditions
 - Impact speed 152 ft/s
 - Limited fire test
- Tests
 - Water sensor test
 - Deployment test
 - Including during or after some environmental tests
 - E.g. Vibrations, icing
 - Unintended deployment
 - = failed test

INSTALLATION STEPS STILL REQUIRED



Flight recorders – Other changes

- ETSO-C123d, C124d, C176b, C177b
 - Removal of the reference to ED-112A sect. 3 « Deployable Recorders »

- All recorders ETSOs
 - Underwater Locator Device now required to operate 90 days
 - (EU) 965/2012 - CAT.IDE.A.185/.190/.195, ...
 - Deep Sea Pressure and Sea Water Immersion test extended to 90 days



➤ C126c update

➤ Introduction of the rev B of ED-62

➤ Includes

- the new « Distress Tracking » type
- Improvement for ADFR ELTs (ELT(AD) in ADFR)
- Improvement for ELT(AD) not in ADFR

➤ Standard may be supplemented by a GNSS test



121.5 Mhz Homing device

- Homing device for Search and Rescue use
 - Necessary for some solutions compliant with CAT.GEN.MPA.210
 - No Automatic ELT installed
- Based on EUROCAE ED-62B « Emergency Locator Transmitters »
 - Sections applicable to the homing signals
 - Same crash resistance as an ELT



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Thank you for your attention!

Any questions?

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