



# SUMMARY OF PROPOSED CHANGE



## Part 60 MOS amendments - Upset prevention and recovery training (UPRT)

Part 60 Manual of Standards Amendment Instrument 2021 (No. 1)

<b>Date</b>	June 2021
<b>Project number</b>	FS 20/03
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## Introduction

The existing Part 60 Manual of Standards (MOS) allows certain simulators a relatively simple qualification path for upset prevention and recovery training (UPRT), with a less onerous software upgrade possible under the standards, but only if the upgrades were made before 24 March 2021. From 25 March 2021, a greater cost burden of upgrading the entire device to the latest standards is required for older simulators used for UPRT, with little additional practical benefit.

Separately, a device<sup>1</sup> qualified under [FSD-1](#) was previously unable to be modified and certified for UPRT as access to stall data supporting the software upgrade was not possible. Recently, Boeing released previously unavailable data that makes an upgrade technologically possible. However, the current drafting of the Part 60 MOS does not contain a provision that recognises FSD-1 as a transitional qualification standard for these devices. This will mean, even with the necessary technological upgrades, the device would not be permitted to undertake UPRT.

The proposed change makes two amendments to the Part 60 MOS to address these issues in two ways:

- Allow further time for operators to upgrade their UPRT capabilities for older devices by amending the transitional deadline from 24 March 2021 to 24 March 2023.
- Include FSD1 as a qualification standard that will allow re-evaluation of an aeroplane qualified flight simulator.

## Background

In 2019 CASA completed amendments to the Part 60 [Manual of Standards \(MOS\)](#) to align technical requirements for aeroplane flight simulators with international standards. This brought Australia in line with updates by the International Civil Aviation Organization (ICAO), European Union Aviation Safety Agency (EASA) and the US Federal Aviation Administration (FAA).

The 2019 amendments were made in the context of the upcoming implementation of Part 121 of CASR (planned for commencement on 25 March 2021 at the time of the Part 60 MOS publication). A provision in Part 121 of CASR will require the inclusion of UPRT for pilots of larger aeroplanes, meaning upgrades are required to some existing training devices that do not already have this capability. This capability is referred to as Extended Envelope Training (EET).

The 2019 amendments provided the standard for EET upgrade that allowed older simulators a less onerous upgrade pathway by limiting the requirements to those relevant to UPRT. To otherwise upgrade an entire device would be a much more onerous and costly process.

The Part 60 MOS currently includes a process of re-qualification for UPRT simulators which is aligned to FAA [FSTD Directive 2](#). These standards (incorporated within [14 CFR Part 60](#)), provide the separate upgrade pathway for older simulators. The effect of including this process was to allow older devices an added capability for EET (and other capabilities) to leading international, but not required, standards without the cost burden of upgrading the entire device.

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<sup>1</sup> AUS 08 B737-400 operated by Qantas

The period for EET-only upgrades of older devices was permitted on a transitional arrangement in the Part 60 MOS and ended on 24 March 2021 to align with the previously planned commencement of Part 121 of CASR. However, the commencement of Part 121 of CASR has now been delayed until [2 December 2021](#).

The effects of COVID-19 on the aviation industry have exacerbated the issue. Travel restrictions and the economic impacts has created additional barriers to the upgrade opportunities offered under the transition arrangements. To date, this has led to only a partial uptake of the upgrade opportunities.

Additionally, a device qualified under FSD-1 was previously unable to be modified and certified for UPRT due to technological limitations relating to shortcomings in data availability to support the upgrade of the computer model for EET capability. However, that device now has access to stall data following a release of a previously unavailable data package from Boeing aimed at addressing the upgrade issue. This meant that 'sister' devices in the USA could be upgraded just for EET whereas a gap in the Part 60 MOS recognising the FSD1 as a transitional qualification level for the purposes of re-evaluation means that Australian-based devices could not meet the standard required for UPRT.

## **Purpose and scope of the proposed amendments**

The policy is intended to provide the additional time operators have indicated is needed to meet UPRT standards. The additional time is limited to expire on 24 March 2023. There is no intention of giving ongoing effect to the transitional arrangement.

It is also intended to provide a pathway for devices qualified under FSD-1 to meet the UPRT standards. These devices must still meet the transitional standards required by other devices but provide an additional recognised qualification method. This element of the policy is intended to have ongoing and general effect though in practice the scope is currently limited to one device that can achieve this standard.

No other provisions of the Part 60 MOS or any other standards related to Part 60 of CASR or UPRT specifically are within the scope of the policy.

The policy proposes to make two amendments to the Part 60 MOS to address the policy problem in two ways:

- To allow further time for operators to upgrade UPRT capabilities for older devices by amending the transitional deadline (currently 24 March 2021) to 24 March 2023.
- To include FSD1 as a qualification standard that will allow re-evaluation of an aeroplane qualified flight simulator.

The primary purpose of the policy is to allow additional time for the upgrade of older devices where operators have been limited in their capacity to do so. This policy should result in most operators having sufficient time to complete these upgrades prior to undertake UPRT in the applicable devices prior to more stringent and onerous upgrades required for future upgrades.

The secondary purpose of the policy is to allow the upgrade and certification of the remaining FSD-1 qualified simulator. It is recognised that the potential for other unknown devices previously qualified under the FSD-1 standard could be upgraded and certified UPRT; however,

the likelihood is extremely low. In any case, given the standard that must be met to do so, this would not be a negative outcome, simply unexpected.

The scope of the policy is limited to changes in Chapter 2 of the Part 60 MOS, specifically subsection 5 (4).

## Previous consultations

The transition limit on the timescale in which EET-only upgrades could be allowed was put in place to encourage higher standards in device standards and to recognise the difficulty in maintaining and qualifying older pre-Part 60 of CASR devices which were no longer supported by the training device manufacturers.

For convenience and to meet industry concerns regarding the logistical challenges of upgrades, it was agreed with industry at a consultation meeting on 20 February 2019, that such EET upgrades for older devices should be completed by 24 March 2021 to coincide with the commencement of Part 121 of CASR. However, other barriers, such as COVID-19 limiting international travel, have meant that this timeline has been unachievable.

## Impact on industry

These measures do not impose any additional costs to industry and provides relief from the impacts of unforeseen COVID restrictions. By extending the deadline for upgrades by 2 years, the policy reduces the burden on freight operators and simulator providers by increasing certainty over requirements to meet device standards, including relief from international travel for UPRT training.

Most importantly, the measures allow operators to complete the required upgrades while avoiding significant increases in full upgrade qualification costs that would otherwise be necessary. It is estimated in some cases this will represent a cost saving of more than \$1 million per device when compared against the cost of the upgrading the entire device.

In addition, the time needed for the upgrade required by this policy is significantly less than the full upgrade that would be required otherwise (2 weeks vs 6 weeks). This time reduction represents a substantial benefit for operators, with disruption to commercial operations being minimised.

## Safety risk analysis

The policy does not diminish aviation safety because the transition does not permit devices to be used to undertake the training until an EET upgrade is completed. There will be no negative effect to the existing training system and a significantly positive impact upon operators finalising the upgrades.

The policy will assist in the implementation of the safety critical UPRT requirements training options thereby lifting training standards principally for Part 121 and Part 142 operations. The safety benefits of UPRT and specifically simulator based UPRT are well understood. The policy will support the continuous improvements required to ensure that devices used for UPRT in Australia meet internationally recognised standards and reduce the incidence of ineffective training.

## **Regulation impact statement**

CASA has lodged a regulation impact statement with the Office of Best Practice Legislation and will publish any findings in the summary of consultation.

## **Closing date for comment**

CASA will consider all comments received as part of this consultation process and incorporate changes as appropriate. Comments on the draft Part 60 MOS should be submitted through the online response form by close of business 7 July 2021.