**Australian Government**

**Civil Aviation Safety Authority**

LEGAL, INTERNATIONAL AND REGULATORY AFFAIRS DIVISION

Our Ref:
Your Ref: 2019/2516 & 2019/2553

15 February 2024

Ms Georgia Moloney
Coronial Investigation Officer
Coroner's Court of Queensland

**By email**: southeastern.coroner@justice.qld.gov.au

Dear Ms Moloney,

**Response to Coroner's Recommendations**
**Inquest into the Deaths of Martinus Van Hattem and Trista-Lea Applebee**
**File Numbers: 2019/2516 and 2019/2553**

We refer to Coroner Lee's findings of inquest dated 4 April 2023 and the recommendations directed to the attention of the Civil Aviation Safety Authority (**CASA**).

CASA has completed a review of the findings and recommendations and provides the comments and progress report set out below in respect of each of the Coroner's recommendations.

**Recommendation 1 – paragraph 211**

> *CASA should review the extent to which its surveillance of flight instructors who conduct flight training for a flight activity endorsement of a pilot of a Warbird aircraft is sufficient and effective to ensure that those flight instructors are appropriately managing their safety risks, are complying with all relevant regulations and understand the requirements of applicable flight instructor standards of performance when conducting such endorsement training.*

1. CASA accepts this recommendation and confirms that it has prepared Terms of Reference to conduct campaign surveillance of flight instructors who hold an approval under regulation 141.035 of the *Civil Aviation Safety Regulations 1998* (**CASR**). The purpose of the campaign is to:
   a. conduct surveillance on CASR 141.035 approval holders operating as individuals (as opposed to operating under an approved Part 141 training school);
   b. identify activities covered by CASR141.035 which, if not carried out properly, may contribute to poor training outcomes;

c. identify activities which may be non-compliant with current regulatory requirements; and

d. review current prioritisation and recommended levels of surveillance on CASR 141.035 individual approval holders.

2. The campaign will also seek assurances that instructors have:

a. demonstrated their competency to a person authorised by CASA to conduct a flight test for the relevant training endorsement, and

b. obtained and hold the relevant flight activity training endorsement (CASA Instrument 62/20 section 7 refers).[1]

3. It is anticipated that the initial program of campaign surveillance will take place before the end of calendar 2024, with results of the program to be assessed and any trends identified. Future decisions on surveillance of this nature and its scope would be informed by the results of the campaign.

**Recommendation 2 – paragraph 213**

*CASA should consider whether all flight instructors accredited to provide training and instruction for flight activity endorsements should be required to provide a minimum period or duration of training and instruction with relevant aerobatic manoeuvres and tasks demonstrated and performed in an appropriate sequence under an approved syllabus of flight activity endorsement training.*

4. CASA has considered this recommendation and its potential application in the context of current regulatory requirements for flight instructions and assessment.

5. CASA will monitor the outcomes of the proposed surveillance campaign referred to in response to Recommendation 1 above to determine whether the requirements of the CASR Part 61 Manual of Standards (**MOS)** are being met by instructors.

6. The introduction of CASR Part 61 in September 2014 was the culmination of a policy shift away from **prescriptive** based requirements to **competency**-based assessment in accordance with an approved syllabus of training for the flight activity involved. In respect of aerobatic training, the skills and knowledge requirements are contained in the CASR Part 61 MOS. Although there is no specific minimum time period for training required in order to cover all of the requirements contained in the Part 61 MOS, such training necessarily entails a sufficient amount of time to ensure competence is achieved.

7. Rather than a minimum time period of training being key to the assessment, it is the instructor's ability to be able to assess the trainee as competent in conducting the manoeuvres identified and to the standards identified in the MOS. As noted above, before an instructor can conduct this training and assess a trainee for the flight

[1] See Attachment 1.

activity, the instructor is first required to have demonstrated that they are competent to do so. See CASR 61.385 and the general competency requirements.

**Recommendation 3 – paragraph 214**

*CASA is urged to include within the foreshadowed investigation a consideration of whether the Mueller/Beggs method of spin recovery should continue to be included as a component of the syllabus of flight activity endorsement training conducted by a flight instructor in a YAK 52 aircraft.*

10. CASA has reviewed the concerns raised in relation to the Mueller/Beggs method and its potential use in instructing in YAK 52 aircraft and considers there may be a degree of misunderstanding as to its purpose and use in the training syllabus. The Mueller/ Beggs method of spin recovery is not a component of the practical competencies for the flight activity endorsement for aerobatics. Notably, there are no spin recovery techniques specific to the Yak 52 or any other individual aerobatic aircraft in the CASR Part 61 MOS. The spin recovery requirement contained in the CASR Part 61 MOS is not tailored to any specific spin recovery technique. Rather, those requirements refer to the theoretical training of how an aircraft recovers from a spin, not the technique(s) that are required to be used or that are necessarily effective. The requirement specified in the CASR Part 61 MOS, "**Recover from spin**", provides:

> *"(a) perform pre-manoeuvre checks (b) enter and establish an upright spin (c) identify upright spin and direction of yaw (d) close throttle (e) stop yaw (f) un-stall wing by reducing AOA (g) recover to controlled flight..."*[2]

11. In fact, the Mueller/Beggs spin recovery method is only identified in the CASR Part 61 MOS as an underpinning aeronautical knowledge requirement, in respect of the flight activity endorsement for aerobatics at 500' Unlimited Aerobatics and Spinning. It is *not* a component required to be demonstrated during the flight. This differs from the **Recover from spin** requirement contained in the CASR Part 61 MOS and mentioned above, which more accurately reflects the Power/Ailerons/Rudder/Elevator' (**PARE**) spin recovery technique.

12. While the spin entry and recovery are components of aerobatic training requirements, the entry and recovery from the spin are specific to the aircraft type being used for flight training. The information on spin entry and recovery should be detailed and identified by the aircraft manufacturer in the operating instructions for the aircraft, usually it is included in the Pilot Operating Handbook or Flight Manual. See paragraphs 15 to 24 below.

13. For these reasons, the CASR Part 61 MOS does not include the Mueller/Beggs method of spin recovery as a practical component of the syllabus of flight activity endorsement training conducted by a flight instructor in a YAK 52 aircraft. In the context of a YAK 52 aircraft, its practical demonstration is not recommended, as it is not a spin recovery technique known to recover that type of aircraft from a developed

[2] F2021C00449 - Section 6 – FLIGHT ACTIVITY ENDORSEMENT STANDARDS – 2.6 FAE-1.6.

spin. CASR Part 61 MOS has the Mueller/Beggs method as a knowledge requirement for the spinning flight activity endorsement; a pilot of a YAK 52 is expected to be aware of the Mueller/Beggs method as a knowledge component and importantly its limitations.

14. CASA intends to draw to the further attention of Warbird instructors the investigation conducted by the ATSB as to the use of the Mueller/Beggs method, the limitations of its use more generally and, specifically, its inapplicability to YAK 52 aircraft is to be reinforced.

**Recommendation 4 – paragraph 216**

*CASA should review the English version of the Aircraft Flight Manual or Pilot Operating Handbook for YAK 52 aircraft to ensure that it provides sufficient information for pilots relating to aerobatic manoeuvres and spin recovery techniques that enable the pilot in command to comply safely with the requirements, instructions, procedures or limitations concerning the operation of the aircraft that are set out in the AFM or POH.*

15. CASA has noted this recommendation and given consideration to how it could be implemented under the existing regulatory framework, noting that Warbird aircraft are not ICAO Annex 8 aircraft and are therefore not required to have an AFM.

16. While Advisory Circular AC 21-34 v1.1 of October 2022 refers to the circumstances in which a person may apply to CASA or a relevant approved design organisation (or other person) for approval of a change to a flight manual for an aircraft, AC 21-34 is only applicable to an ICAO Annex 8 aircraft. In contrast, a Warbird aircraft is not an ICAO Annex 8 aircraft.

17. The AC states at paragraph 2.4.3 (b) that historic and ex-military aircraft (such as the YAK 52) may not be required to have an AFM.

18. While not a regulatory requirement, CASA is aware that there are a number of flight manuals / Pilot Operating Handbooks that have been developed by different sources to enable the YAK 52 to be operated within the airworthiness limitations of the aircraft. Most of these manuals contain details of the aerobatic manoeuvres permitted and the operational limitations of those manoeuvres—including spins and spin recovery requirements. However, it has also been identified that at least one manual reviewed by CASA does not have adequate information on spin recovery requirements.

19. As the Australian Warbirds Association Limited (**AWAL**) is recognised as the specialist warbird organisation in Australia, CASA, will urge AWAL to contact all operators/owners of YAK 52 aircraft associated with AWAL, to report back to CASA with respect to the following:

    (a) whether the aircraft has one or more flight manuals / pilot operating handbooks;

(b) if so, to determine if those manuals contain adequate information in regard to the operations that are intended to be conducted in the aircraft;

(c) whether the flight manual / pilot operating handbooks include appropriate details as to spin recovery requirements and the range of aircraft operations, including aerobatic manoeuvres; and

(d) whether the flight manual / pilot operating handbooks provide information regarding requirements for operation of the aircraft with a passenger.

20. Depending upon the above responses, CASA also intends to further liaise with AWAL to agree on means by which to ensure that all YAK 52 aircraft have a Pilot Operating Handbook or Flight Manual which is fit for purpose and contains sufficient information in respect of aerobatics and spin recovery.

21. If it becomes apparent that some YAK 52 aircraft operators do not currently have a flight manual/Pilot Operating Handbook, then it is expected that AWAL will (with CASA's input if necessary) reinforce the importance of only operating the aircraft with a suitable manual or handbook.

**Recommendation 5 – paragraph 227**

**Dot Point 1 from this recommendation.**

- CASA and AWAL should take appropriate steps to:
  - ensure that a risk-based assessment of the available evidence concerning incidents in which objects or loose articles have moved to the rear of YAK 52 aircraft in the course of aerobatic manoeuvres, adversely affecting elevator control of the aircraft, is undertaken; and
  - determine whether mandating the installation of foreign object damage barriers in the rear fuselage of YAK 52 is a necessary or desirable safety measure to be taken in an appropriate manner.

25. *With respect to the first open dot point above,* AWAL has informed CASA that, on 3 October 2023, it issued a notification to all AWAL members, for the particular attention of YAK 52 owners / operators, to consider the fitment of a foreign object damage (**FOD**) barrier in the aircraft for safety reasons. A copy of the notice to AWAL members is at Attachment 2.

26. *With respect to the second open dot point above,* AWAL has not at this time made the requirement mandatory. Further discussion with AWAL on this matter is pending, with attention to the propriety of mandating the fitment of FOD barriers. AWAL holds delegated authority under regulation 38 of the *Civil Aviation Regulations 1988* (**CAR**) to direct that FOD barriers be installed.

27. CASA will look to AWAL for advice on the level of voluntary fitment of FOD barriers by YAK 52 owners and will confer with AWAL on such further action as may be necessary and appropriate in light of that advice.

**Dot Point 2.**

- CASA should undertake and complete a comprehensive review and assessment of the need to establish an approved airframe life limit for YAK 52 type aircraft in Australia having regard to:
  - the ATSB report of its investigation into the air accident involving VH-PAE;
  - relevant United Kingdom Mandatory Permit Directives;
  - airworthiness information obtained from the designer of the aircraft (A.S. Yakovlev);
  - airworthiness information obtained from the manufacturer of the aircraft (Aerospace SA); and
  - any other relevant airworthiness information and foreign state or foreign authority material that may be obtainable by CASA dealing with the issue of an appropriate airframe life for the YAK 52 aircraft type.

28. CASA accepts this recommendation and is continuing with a comprehensive review and assessment of the need to establish an approved airframe life limit for YAK 52 aircraft operating in Australia. Since the Coroner's findings were published, CASA has made several enquiries seeking further information in respect of airframe life limits for the YAK 52 aircraft. These are described in paragraphs 31 below. That process remains ongoing and will also involve further consultation with AWAL.

29. Both the previously approved CASA SOM and the AWAL SOM also have a structural integrity program that is required to be undertaken/carried out every 3 years. This structural integrity program is additional to the requirements of the Aerostar maintenance schedules and is similar to (but not quite as detailed as) the rolling program required in the UK (AAS 5009/CAA ANN 29189).

30. At this point, and subject to such information as CASA may yet receive in response to our open inquiries, CASA is satisfied that YAK 52 aircraft are being operated safely in Australia under the oversight of AWAL in accordance with approved maintenance systems. In conjunction with the likely safety improvements resulting from the fitment of FOD barriers, there are no immediate or identified concerns as to the general airworthiness of YAK 52 aircraft operating in Australia.

31. Once the completed the comprehensive review and assessment to establish if an approved airframe life limit is required or the YAK 52 can be maintained through an

appropriate inspection program without a mandatory life limit, CASA will notify the coroner of the results of the review.

**Dot point 3**

- CASA and AWAL should review the way in which the existing Permit Index Assessment system for limited category aircraft is used, interpreted and applied by AWAL, in relation to YAK 52 aircraft, to ensure that any risks to public safety posed by such aircraft, especially if flown over populous areas in the course of aerobatic flights, are fully, adequately and consistently assessed in accordance with the stated objectives of the Permit Index Assessment System.

32. At the outset, it is noted that no aircraft are permitted to conduct aerobatic flights over a populous area unless approved by CASA. See CASR 91.185. In this instance, the accident aircraft was not authorised to conduct aerobatics over a populous area. In this connection, the inquest established that the pilot had repeatedly failed to observe his regulatory obligations and performed aerobatic manoeuvres contrary to his licence privileges and the applicable requirements of the regulations.

33. CASA has reviewed the Permit Index Assessment (**PIA**) with reference to YAK 52 aircraft. CASA is satisfied that the design of the PIA remains fit for purpose subject to its application in accordance with its terms. CASA recognises that some confusion potentially arises is in determining how to apply the PIA in the absence of evidence or incomplete evidence for a particular aircraft. This can include gaps in the history of the aircraft or that is has been involved in accidents or incidents which may have compromised the aircraft as compared to others of a similar type.

34. Once the comprehensive review and assessment of the airframe life limits is completed in consultation with AWAL, it is anticipated that a review of the current PIA ratings for all YAK 52 aircraft will be undertaken.

CASA will continue to liaise with AWAL in considering and addressing the issues discussed above in response to the Coroner's recommendations. On this basis, and in the light of such further information as CASA and AWAL may receive, we will continue to monitor developments, having particular regard to matters bearing on the airframe life limits for, and the application of the PIA system to, YAK 52 aircraft.

CASA thanks the Coroner for the opportunity to respond to the recommendations and invites you to contact the undersigned if you or the Coroner should have any further questions in relation to this matter.

We apologise for the delay in the provision of these comments.

Yours sincerely,

[redacted]

**Attachment 1 – Signed Instrument - CASA 62/20 – Conditions on Flight Crew Authorisations (Edition 3) Instrument 2020**

**Australian Government**
**Civil Aviation Safety Authority**

Instrument number CASA 62/20

I, CHRISTOPHER PAUL MONAHAN, Executive Manager, National Operations & Standards, a delegate of CASA, make this instrument under regulation 11.068 of the *Civil Aviation Safety Regulations 1998*.

Christopher P. Monahan
Executive Manager, National Operations & Standards

17 December 2020

## CASA 62/20 — Conditions on Flight Crew Authorisations (Edition 3) Instrument 2020

### 1 Name

This instrument is *CASA 62/20 — Conditions on Flight Crew Authorisations (Edition 3) Instrument 2020*.

### 2 Commencement

This instrument commences on the day after registration.

### 2A Repeal

Instrument number CASA 07/17 entitled *Conditions on authorisations — flight crew licences and aircraft endorsements (Edition 2)*, with Federal Register of Legislation number F2017L00085, is repealed.

### 3 Definitions

*Note* In this instrument, certain terms and expressions have the same meaning as they have in the *Civil Aviation Act 1988* and the regulations. These include: ***adventure flight***, ***air traffic control***, ***pilot licence*** and ***training endorsement***.

(1) In this instrument:

*Note* For ***active participation*** see ***participation***.

***hold short line*** means a line on a hold short runway beyond which the pilot in command of a landing aircraft, following the pilot's active participation, is instructed not to proceed.

***hold short runway*** means a runway used for LAHSO, being a runway that has aerodrome signs, runway markings and lighting requirements in accordance with the applicable standards.

***instrument flying*** means controlling an aircraft's attitude during flight solely by reference to the aircraft's flight instruments.

***LAHSO*** means a Land and Hold Short Operation, being an operation in which the pilot in command of an aircraft has accepted a requirement to land on a hold short runway and hold short of the hold short line.

***participation***, in relation to LAHSO, has the following meanings:

(a) ***active participation*** means accepting a requirement to hold short of a hold short line, after receiving an alert about aircraft on a crossing runway;

(b) ***passive participation*** means having unrestricted use of a full runway but acknowledging an alert about a LAHSO on a crossing runway.

***visual flying*** means controlling an aircraft's attitude during flight by reference to features outside the aircraft.

(2) Subject to subsection (1), expressions used in this instrument have the same meaning as in Part 61 of CASR as in force from time to time.

### 4 Practising instrument flying

It is a condition on an aeroplane pilot licence that the holder of the aeroplane pilot licence must not practice instrument flying in an aeroplane while the aeroplane is flying under the V.F.R. unless:

(a) all the following requirements are satisfied:

(i) the aeroplane is equipped with fully functioning dual controls;

(ii) the other control seat is occupied by a person who is authorised under Part 61 of CASR to conduct a flight in the aircraft;

(iii) the person has sufficient vision from the aeroplane to enable the person to safely fly the aeroplane in visual flying; or

(b) both the following requirements are satisfied:

(i) the aeroplane is equipped with fully functioning dual controls;

(ii) the holder is accompanied by an authorised flight instructor.

*Note* It is an offence under the *Civil Aviation Act 1988* for a person to fly an aeroplane under the I.F.R. unless the person is authorised to do so under Part 61 of CASR.

### 5 Active participation in LAHSO

(1) It is a condition on an aeroplane pilot licence that the holder of the aeroplane pilot licence must not, while operating an aeroplane, actively participate in LAHSO unless:

(a) the operator of the aeroplane:

(i) has a training and checking organisation approved under regulation 217 of the *Civil Aviation Regulations 1988*; and

(ii) has assessed the holder as competent in those matters specified in Appendixes 1 and 2; and

(iii) has authorised the holder to actively participate in LAHSO; or

(b) the holder has been certified in the holder's personal logbook by a LAHSO instructor as being:

(i) competent to the standards specified in Appendixes 1 and 2; and

(ii) able to actively participate in LAHSO; or

(c) the holder is receiving training or being instructed or assessed for competency to the standards specified in Appendixes 1 and 2 by a person authorised under Part 61 of CASR to:

(i) conduct flight training in that aircraft; and

(ii) actively participate in LAHSO.

(2) A logbook certification referred to in paragraph 5 (1) (b) must be in the following form:

*(Name of pilot and ARN)* has been instructed in, and found competent to actively participate in, Land and Hold Short Operations (LAHSO) in accordance with *(this section)* on *(date)*.

Signed: *(LAHSO instructor)*

ARN: *(of LAHSO instructor)*

Flying Training Organisation:*(Name, if applicable)*

## 6 Condition on an MU2 aircraft type rating

It is a condition on an MU2 aircraft type rating that the holder of the MU2 single-pilot multi-engine aeroplane type rating must not exercise the privileges of the rating as a pilot in command unless the holder has:

(a) accumulated at least:

(i) 50 hours of aeronautical experience as pilot in command under supervision of MU-2 aircraft; or

(ii) 50 hours of aeronautical experience as pilot in command of multi-engine turbo-prop powered aircraft and 30 hours of aeronautical experience as pilot in command under supervision of MU-2 aircraft; and

(b) within the previous 12 months, satisfactorily completed a flight review or proficiency check conducted in an MU-2 aircraft; and

(c) within the previous 90 days, completed 1 hour of flight time, including 3 landings in an MU-2 aircraft; and

(d) within the previous 24 months, completed a proficiency check for the MU2 type rating and has been certified by the person conducting the proficiency check as having viewed:

(i) if the check was completed before 10 June 2020 — either the Mitsubishi Icing Awareness Training (IAT) video YET-01295 or the Mitsubishi Icing Awareness Training (IAT) video YET-15704; and

(ii) if the check was completed on or after 10 June 2020 — the Mitsubishi Icing Awareness Training (IAT) video YET-15704.

## 7 Condition on an instructor rating

It is a condition on an instructor rating that the holder of an instructor rating with a training endorsement may only conduct training for a flight activity endorsement if:

(a) the holder has demonstrated competency in doing so to a person authorised to conduct a flight test for the relevant training endorsement; and

(b) the person authorised to conduct the flight test mentioned in paragraph (a) holds the flight activity endorsement.

## 8 Condition on a single-engine helicopter class rating

It is a condition on a single-engine helicopter class rating that the holder of that rating may conduct operations in an R22 or R44 helicopter only if:

(a) the holder has completed a flight review in accordance with regulation 61.745 of CASR; and

(b) the flight review was conducted in an R22 or R44 helicopter.

**9 Adventure flights**

It is a condition on a pilot licence that the holder of the pilot licence must not conduct an adventure flight of a limited category aircraft as pilot in command unless the holder holds:

(a) a commercial pilot licence or an air transport pilot licence, with appropriate flight crew ratings and endorsements for a flight of that kind; and

(b) a current class 1 medical certificate.

**10 Condition on a type rating — single-pilot operation**

(1) Subsection (2) applies to a holder of a type rating for an aircraft that is certificated for single-pilot operation who passed the flight test, mentioned in paragraph 61.810 (3) (c) of CASR, for the rating conducted as a multi-crew operation.

(2) It is a condition on the holder's type rating that the holder must not exercise the privileges of the rating in a single-pilot operation, unless the holder has:

(a) completed flight training to meet the general competency requirement in regulation 61.385 of CASR to operate an aircraft covered by the type rating in a single-pilot operation; and

(b) met one of the following requirements:

(i) passed the flight test, mentioned in paragraph 61.810 (3) (c) of CASR, for the rating conducted as a single-pilot operation;

(ii) successfully completed an instrument proficiency check, conducted by a flight examiner, as a single-pilot operation in an aircraft covered by the type rating;

(iii) successfully completed an operator proficiency check conducted as a single-pilot operation in an aircraft covered by the type rating.

## Appendix 1

### Standards to be met for the LAHSO logbook certification

1 Introduction

1.1 This Appendix specifies the standards of competency and aeronautical knowledge required for the issue of a LAHSO logbook certification. These standards must be satisfied by a combined oral examination and practical check carried out by a person authorised to issue the logbook certification.

1.2 Before the issue of a LAHSO endorsement, the applicant must demonstrate that the standards of flying competency specified in Appendix 2 have been achieved.

1.3 The oral examination must indicate an ability to satisfy each of the items included in the aeronautical knowledge syllabus detailed in clause 2 of this Appendix.

1.4 In the oral examination, candidates may refer to AIP (complete — including En Route Supplement Australia (AIP-ERSA) and Aerodrome Directory) and Parts 20 to 95 of the Civil Aviation Orders.

1.5 The practical check must be conducted in an aeroplane at an aerodrome at which LAHSO are authorised or in a synthetic flight trainer approved by CASA as suitable for that purpose. LAHSO need not be in use at an aerodrome during the test if the appropriate procedures are simulated by the person conducting the check.

2 Aeronautical knowledge syllabus

2.1 Recall the procedures for participation in LAHSO in Australia.

2.2 Identify the aerodromes where LAHSO may be conducted in Australia.

2.3 Explain the term ***active participation.***

2.4 Explain the term ***passive participation.***

2.5 Identify and interpret the aerodrome signs, runway markings and lighting requirements that apply to LAHSO.

2.6 Identify the requirements for pilots to participate in LAHSO.

2.7 Identify the aircraft performance categories defined for participation in LAHSO.

2.8 State the conditions under which LAHSO may be offered by air traffic control to pilots.

2.9 State the methods of notification that LAHSO is in progress.

2.10 State the "read back" requirements for pilots engaged in active participation in LAHSO.

2.11 Establish from AIP-ERSA the landing distance available for LAHSO.

2.12 Calculate the aeroplane landing distance required in dry, wet or downwind conditions, using the procedure set out in AIP.

## Appendix 2

## Land and Hold Short Operations — LAHSO practical test

| Elements | | Performance Criteria | |
|---|---|---|---|
| 1 | Determine the landing distance for LAHSO is adequate for the prevailing conditions | 1 | Consult the AIP-ERSA and extract the landing distance available at the destination for LAHSO. |
| | | 2 | Landing distance is calculated in accordance with the manufacturer demonstrated landing distance chart and factored in accordance with runway conditions. |
| | | 3 | LAHSO conditions are assessed in accordance with the procedure set out in AIP, and acceptance notified using appropriate radio communications with air traffic control. |
| 2 | Execute LAHSO | 1 | Aerodrome signs, runway markings and lighting requirement that apply to LAHSO are identified and complied with. |
| | | 2 | Aeroplane is landed by the nominated touchdown point +200 ft (60 metres). |
| | | 3 | Aeroplane is stopped within specified runway distance before hold short line — without the use of maximum reverse thrust. |
| | | 4 | Abnormal runway conditions, such as wet runway or downwind component, are identified and appropriate procedures are applied to comply with LAHSO requirements. |
| | | 5 | Appropriate missed approach procedures are demonstrated. |
| | | 6 | Situational awareness is maintained throughout the procedure. |

**Explanatory Statement**

**Civil Aviation Safety Regulations 1998**

**CASA 62/20 — Conditions on Flight Crew Authorisations (Edition 3) Instrument 2020**

**Purpose**
The purpose of the instrument is to impose a new condition on flight crew type ratings for aircraft that are certificated for single-pilot operation to ensure that pilots flying those aircraft in single-pilot operations have completed appropriate training and assessment in single-pilot operation of the aircraft.

**Legislation**
Section 98 of the *Civil Aviation Act 1988* (the *Act*) empowers the Governor-General to make regulations for the Act and in the interests of the safety of air navigation. Relevantly, the Governor-General has made the *Civil Aviation Safety Regulations 1998* (***CASR***) and *Civil Aviation Regulations 1988* (***CAR***). Paragraph 98 (5A) (a) of the Act provides that the Civil Aviation Safety Authority (***CASA***) may issue instruments in relation to matters affecting the safe navigation and operation, or the maintenance, of aircraft.

Subsection 98 (5D) of the Act provides that a legislative instrument made under the Act or the regulations may apply, adopt or incorporate any matter contained in any instrument or other writing as in force or existing from time to time, even if the other instrument or writing does not yet exist when the legislative instrument is made.

Subregulation 11.068 (1) of CASR provides that, for subsection 98 (5A) of the Act, CASA may issue a legislative instrument that imposes conditions relating to a matter mentioned in that subsection on a specified class of authorisations. Under subregulation 11.068 (2), the class of authorisations may include authorisations granted before the imposition of the condition. Under subregulation 11.068 (3), a condition imposed under subregulation (1) is taken to be a condition of every authorisation of the class mentioned in the instrument.

Under regulation 11.077 of CASR, the holder of an authorisation commits a strict liability offence if the holder contravenes a condition imposed on the authorisation under regulation 11.068 of CASR.

Part 61 of CASR sets out the licensing scheme for pilots of registered aircraft, including requirements for the grant of flight crew licences, ratings and endorsements. These licences, ratings and endorsements are authorisations for the purposes of regulations 11.068 and 11.077 of CASR.

Regulation 61.165 of CASR provides that CASA, or an examiner or an approval holder, must grant a flight crew rating to an applicant for a rating if, amongst other things, the applicant meets the requirements mentioned in Part 61 for the grant of the rating.

Regulation 61.385 of CASR places a general competency requirement on pilots. It provides that the holder of a pilot licence is authorised to exercise the privileges of the licence in an aircraft only if the holder is competent in operating the aircraft to the standards mentioned in the Part 61 Manual of Standards for the class or type to which the aircraft belongs, including in all areas specified in that subsection, such as operating the aircraft's navigation and operating systems.

Under regulation 61.770 of CASR, subject to specified limitations (including the limitation in regulation 61.385 of CASR), the holder of a pilot licence and a pilot type rating is authorised to exercise the privileges of the licence in an aircraft of the type covered by the rating.

Regulation 61.810 of CASR sets out the requirements for the grant of a pilot type rating. In particular, paragraph 61.810 (3) (c) requires an applicant for the rating to have passed the flight test mentioned in the Part 61 Manual of Standards for the rating.

Under subsection 33 (3) of the *Acts Interpretation Act 1901*, where an Act confers a power to make, grant or issue any instrument of a legislative or administrative character (including rules, regulations or by-laws), the power shall be construed as including a power exercisable in the like manner and subject to the like conditions (if any) to repeal, rescind, revoke, amend, or vary any such instrument.

**Background**
CASA has previously issued instrument number CASA 07/17, entitled *Conditions on authorisations — flight crew licences and aircraft endorsements (Edition 2)*, [Federal Register of Legislation (***FRL***) number F2017L00085] (***Edition 2***), that imposes conditions on various flight crew licences, ratings and endorsements.

Some aircraft are certificated for both single-pilot operation and multi-crew operation. That is, they can be flown with one or more pilots. Some aircraft operators conduct multi-crew operations using aircraft that are certificated for single-pilot operation. The requirement to conduct multi-crew operations in those aircraft may be due to regulatory standards or operational decisions. Some operators of such aircraft want to train their pilots for multi-crew operations, rather than single-pilot operations, in order to optimise the training and to ensure their pilots are fully prepared for the operations to which they will be assigned. Currently, this cannot be achieved as single-pilot competency standards apply.

A pilot completing flight training and a flight test, conducted as a multi-crew operation, for a type rating for an aircraft that is certificated for single-pilot operations will not have demonstrated competency in operating the aircraft in a single-pilot operation. The standard operating procedures will have included multi-crew procedures, such as checklist management, coordination in procedures and role differentiation. Therefore, the privileges of the pilot's type rating should be limited to multi-crew operations.

Feedback from industry has suggested that flight training conducted as a single-pilot operation for a pilot who will be employed by an operator to conduct flights in the aircraft as a multi-crew operation adds to the costs of training and does not enhance safety. The ability to maximise a pilot's exposure to multi-crew operation, following

completion of training in multi-crew cooperation and training for a pilot type rating, can enhance the pilot's non-technical skills necessary for safe multi-crew operation.

**Overview of instrument**
The instrument includes the same conditions as were in Edition 2 and includes a new condition in section 10 of the instrument. The new condition applies to holders of a type rating for an aircraft that is certificated for single-pilot operation if they passed the flight test for the rating as a multi-crew operation. It effectively prohibits the holder from piloting an aircraft of that type in a single-pilot operation until the holder has completed training and a specified assessment of competency in single-pilot operation of the aircraft.

In addition, section 6 has been updated to refer to a new icing awareness training video to be viewed by pilots of MU-2 aircraft.

CASA has assessed the impact of the conditions in this instrument and is satisfied that they have no adverse impact on the safety of the air navigation.

In accordance with subsection 33 (3) of the *Acts Interpretation Act 1901*, the instrument repeals and replaces Edition 2.

***Content of instrument***
Section 1 of the instrument specifies the name of the instrument.

Section 2 of the instrument provides that it commences on the day after registration on the FRL.

Section 2A of the instrument repeals Edition 2.

Section 3 includes a note that certain terms and expressions in the instrument have the same meaning as in the Act and the regulations and gives examples of terms and expressions that can be found in the CASR Dictionary or section 2 of CAR. Subsection 3 (1) of the instrument contains definitions of particular terms used in the instrument.

The instrument imposes conditions on various flight crew licences, ratings and endorsements granted under Part 61 of CASR and, therefore, expressions used in the instrument are intended to have the same meaning as in Part 61 of CASR. Consequently, subsection 3 (2) provides that, subject to subsection 3 (1), expressions used in the instrument have the same meaning as in Part 61 of CASR.

Sections 4 to 9 of the instrument are substantially the same as the corresponding sections in Edition 2.

Before it is was repealed on 1 September 2014, paragraph 2.7 of Civil Aviation Order (***CAO***) 40.0 contained requirements for the practising of instrument flying in an aeroplane while the aeroplane is flying under the V.F.R. (***visual flight rules***). Section 4 of the instrument contains, as conditions on pilot licences, requirements, which are substantially the same as paragraph 2.7 of CAO 40.0.

Before it is was repealed on 1 September 2014, subsection 4 of CAO 40.0 regulated participation in land and hold short operations (***LAHSO***) as defined. Section 5 of the instrument contains, as conditions on pilot licences, requirements which are substantially unaltered from subsection 4 of CAO 40.0. Appendixes 1 and 2 of CAO 40.0, which related to LAHSO, have been included in the directions. They are substantially unaltered.

Section 6 of the instrument contains a condition applicable to the holder of an MU2 aircraft type rating. Under this condition, the holder of an MU2 single pilot multi-engine aeroplane type rating must not exercise the privileges of the rating as pilot in command unless the holder has carried out certain training. These training requirements are substantially the same as the conditions on Mitsubishi MU-2B endorsements that were contained in subsection 8B of CAO 40.1.0 before it was repealed on 1 September 2014. They must be met by Mitsubishi MU-2B pilots to allow them to deal with unsafe conditions that may arise due to icing occurring on those aeroplanes. One of requirements is to have viewed a Mitsubishi Icing Awareness Training (***IAT***) video within the previous 24 months. The previous training video YET-01295 has been replaced with training video YET-15704. The instrument continues to recognise viewing of the previous training video before 10 June 2020 as sufficient to meet the requirement.

Section 7 of the instrument states, as a condition on an instructor rating, that the holder of an instructor rating with a training endorsement may only conduct training for a flight activity endorsement if the holder has demonstrated competency in doing so to a person who is authorised to conduct a flight test for the relevant training endorsement. The person conducting the flight test must also hold the flight activity endorsement.

Section 8 of the instrument states, as a condition on a single-engine helicopter class rating, that the holder of that rating may conduct operations in a Robinson R22 or R44 helicopter only if the holder has completed a flight review in accordance with regulation 61.745 of CASR that has been conducted in an R22 or R44 helicopter.

Section 9 of the instrument applies to holders of a pilot licence who conduct adventure flights. It provides that it is a condition on a pilot licence that the holder of the pilot licence must not conduct an adventure flight of a limited category aircraft as pilot in command unless the holder holds a commercial pilot licence or an air transport pilot licence, with appropriate flight crew ratings and endorsements for a flight of that kind, and a current class 1 medical certificate.

As adventure flights are private operations, in the absence of the conditions in section 9 of this instrument, it may be possible for a pilot with only a private pilot licence or only a class 2 medical certificate to conduct an adventure flight as pilot in command. This would be contrary to current practice and the interests of the safety of air navigation.

Section 10 of the instrument is a new requirement that has been included in the instrument to address the issue of single-pilot operation of aircraft by pilots who have only been flight tested to operate the aircraft as a multi-crew operation.

Subsection 10 (1) provides that the condition in subsection 10 (2) applies to the holder of a type rating for an aircraft that is certificated for single-pilot operation if the holder's

flight test for the rating (to satisfy paragraph 61.810 (3) (c) of CASR) was conducted as a multi-crew operation.

Under subsection 10 (2), it is a condition on the holder's type rating that the holder must not exercise the privileges of the rating in a single-pilot operation unless the holder has met specified training and assessment requirements. The training requirement is that the holder has completed flight training to meet the general competency requirement in regulation 61.385 of CASR to operate an aircraft covered by the type rating in a single-pilot operation. The assessment requirement may be met in one of three ways. The first way is by passing a flight test for the rating as a single-pilot operation. The second way is by successfully completing an instrument proficiency check, conducted by a flight examiner, as a single-pilot operation in an aircraft covered by the type rating. The third way is by successfully completing an operator proficiency check conducted as a single-pilot operation in an aircraft covered by the type rating.

Appendixes 1 and 2 of the instrument set out the standards of competency and aeronautical knowledge, for section 5 of the instrument, that a pilot is required to meet in order to actively participate in LAHSO.

**Documents incorporated by reference**
In accordance with paragraph 15J (2) (c) of the *Legislation Act 2003* (the **LA**), this part of the explanatory statement contains a description of the documents incorporated by reference into the legislative instrument, how the document is incorporated, the organisation responsible for each document and how they may be obtained.

This instrument incorporates by reference CASR, CAR and CAO and the Aeronautical Information Publication (***AIP***). As allowed by section 14 of the LA and subsection 98 (5D) of the Act, these documents are incorporated as in force or existing from time to time.

CASR, CAR and CAO are legislative instrument that are freely available on the FRL at: *https://www.legislation.gov.au/*

The AIP is published by Airservices Australia and is freely available and is accessible via the Internet on the following webpage:
*https://www.airservicesaustralia.com/aip/aip.asp*.

This instrument also incorporates the Mitsubishi IAT videos YET-01295 and YET-15704, supplied by Mitsubishi Heavy Industries America, Inc. (***MHI America***). In accordance with subsection 98 (5D) of the Act, the IAT video is incorporated as existing at the time that it is viewed by a pilot. CASA has incorporated the video in the instrument because aviation safety requires that pilots flying the relevant aircraft watch the video at regular intervals to decrease the chance of icing-related incidents or accidents due to pilot error, and because there are no other freely available documents serving the relevant purpose.

Pilots seeking to fly Mitsubishi MU-2 type aircraft must complete training conducted by an operator authorised by CASA under Part 141 of CASR or a training provider authorised by the national aviation authority of a recognised State. MHI America provided CASA with the videos to provide a single point of contact for Australian

operators needing to comply with the requirements for pilots completing the training for the grant of the MU-2 type rating. The Australian operators are aware that CASA has the specified training videos. There is no cost to industry requesting the training video from CASA. This arrangement has been and is supported by the manufacturer and industry training providers.

The video is publicly available but subject to copyright, and therefore not freely available. The cost of obtaining a copy of a video from MHI America is a matter for a person wishing to do so and CASA has no effective control over those costs. However, where practicable, by prior arrangement with CASA, a copy of the video can be made available for viewing free of charge by contacting CASA's Melbourne office.

***Legislation Act 2003***
Under subsection 8 (2) of the LA, if a primary law (such as a regulation made under an Act) gives power to do something by legislative instrument, then, if the thing is done, it must be done by instrument and that instrument is a legislative instrument. This instrument is made under regulation 11.068 of CASR, which provides that CASA may issue a legislative instrument that imposes a condition relating to a matter mentioned in subsection 98 (5A) of the Act on a specified class of authorisations.

Also, under subsection 98 (5AA) of the Act, an instrument issued under paragraph 98 (5A) (a) of the Act is a legislative instrument if it is expressed to apply to a class of persons or aircraft. The instrument applies to classes of persons, being the holders of various flight crew licences, ratings and endorsements.

Further, paragraph 10 (1) (d) of the LA provides that an instrument will be a legislative instrument if it includes a provision that amends or repeals another legislative instrument. This instrument repeals Edition 2 that was a legislative instrument.

The instrument is, therefore, a legislative instrument subject to tabling and disallowance in the Parliament under sections 38 and 42 of the LA.

**Consultation**
CASA undertook consultation with aircraft operators involved in using pilots for multi-crew operations in aircraft that are certificated for single-pilot operation, and a relevant flight training organisation. The proposal for the condition in section 10 arises from requests from those organisations.

CASA did not undertake any additional consultation in relation to sections 4 to 9 of this instrument as those sections are substantially the same as in Edition 2.

CASA is satisfied that no further consultation is appropriate or reasonably practicable for this instrument for section 17 of the LA.

**Office of Best Practice Regulation (*OBPR*)**
The instrument repeals Edition 2 and remakes the same substantive provisions, with a new condition in section 10 of the instrument. OBPR made the assessment that a Regulation Impact Statement was not required for the addition of the requirement in section 10 (OBPR id: 25895).

**Sector risk, economic and cost impact**

Subsection 9A (1) of the Act states that, in exercising its powers and performing its functions, CASA must regard the safety of air navigation as the most important consideration. Subsection 9A (3) states that, subject to subsection 9A (1), in developing and promulgating aviation safety standards under paragraph 9 (1) (c), CASA must:

(a) consider the economic and cost impact on individuals, businesses and the community of the standards; and

(b) take into account the differing risks associated with different industry sectors.

The cost impact of a standard refers to the direct cost (in the sense of price or expense) which a standard would cause individuals, businesses and the community to incur. The economic impact of a standard refers to the impact a standard would have on the production, distribution and use of wealth across the economy, at the level of the individual, relevant businesses in the aviation sector, and the community more broadly. The economic impact of a standard could also include the general financial impact of that standard on different industry sectors.

As the provisions of the instrument (other than section 10) replaces an existing instrument with the same (or largely the same) provisions, there will be no change of economic or cost impact on individuals, businesses or the community of those provisions.

The economic and cost impact of section 10 of the instrument has been be determined by:

(a) the identification of individuals and businesses affected by the instrument; and

(b) how the requirements on individuals and businesses will be different under the instrument compared to existing requirements.

The requirements of section 10 of the instrument apply to pilots of aircraft that are certificated for single-pilot operation who have passed the flight test for the type rating for the aircraft conducted as a multi-crew operation. The instrument will require the pilots to meet new requirements for training and assessment of competency in single-pilot operation of the aircraft before conducting a single-pilot operation in the aircraft. However, it avoids the need for the pilot to pass a flight test for the previous single-pilot type rating, with associated cost benefits. The instrument also affects aircraft operators who employ those pilots as they will not be able to conduct single-pilot operation in the aircraft until the training and assessment requirements are met.

Feedback from the aviation industry has suggested that, for a pilot who will be employed by an operator who conducts flight in the aircraft as a multi-crew operation, flight training conducted as a single-pilot operation adds to the costs of training, removes the opportunity to develop multi-crew non-technical skills essential to the safe operation of aircraft with more than 1 pilot, and does not enhance safety. Discussions with industry have supported the proposal reflected in section 10 of the instrument because of the safety benefits achieved through optimised and more focussed training and possibly reducing costs. The instrument would provide a cost benefit to industry by permitting training and tests for relevant single-pilot type ratings to be conducted in accordance with how the pilots would be required to operate the aircraft. Therefore, the instrument improves training efficiency and effectiveness.

CASA has assessed that the economic and cost impact of the instrument is minor and affects only a small sector of the aviation industry. The Office of Best Practice Regulation has also made the assessment that the impact of the instrument is minor and that a Regulation Impact Statement was not required. As there is no significant economic or cost impact on individuals or businesses, there will be no community impacts.

**Statement of Compatibility with Human Rights**

The Statement of Compatibility with Human Rights at Attachment 1 has been prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*. The instrument does not engage any of the applicable rights or freedoms, and is compatible with human rights, as it does not raise any human rights issues.

**Making and commencement**

The instrument has been made by a delegate of CASA relying on the power of delegation under subregulation 11.260 (1) of CASR.

The instrument commences on the day after it is registered. Sections 2 and 2A of the instrument are automatically repealed in accordance with sections 48C and 48D of the LA.

**Attachment 1**

## Statement of Compatibility with Human Rights

*Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011*

**CASA 62/20 — Conditions on Flight Crew Authorisations (Edition 3) Instrument 2020**

This legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

**Overview of the legislative instrument**
This legislative instrument repeals and replaces instrument number CASA 07/17, entitled *Conditions on authorisations — flight crew licences and aircraft endorsements (Edition 2)* (***Edition 2***), that imposed conditions on various flight crew licences, ratings and endorsements granted under Part 61 of the *Civil Aviation Safety Regulations 1998*.

This legislative instrument substantially retains the conditions in Edition 2 and imposes a new condition on type ratings for aircraft that are certificated for single-pilot operation if the pilot passed the flight test for the rating as a multi-crew operation. The condition in section 10 of the legislative instrument prohibits the pilot from exercising the privileges of the rating in single-pilot operations until the pilot has completed appropriate training and assessment in single-pilot operation of the aircraft.

**Human rights implications**
This legislative instrument does not engage any of the applicable rights or freedoms.

**Conclusion**
This legislative instrument is compatible with human rights as it does not raise any human rights issues.

**Civil Aviation Safety Authority**

Attachment 2 – Notice From AWAL to its members.

## Safety Notice for Yak 52 Owners Only

**From the DSA**

**Apologies for sending this message to all members**

After the coronial inquest for the fatal accident off Sth Stradbroke Is in June 2019, the coroner has released her recommendations. One of which is the installation of a FOD barrier behind the rear seat. Although it was not a contributing factor to this particular accident, quite a number of Yak 52 accidents world wide have been attributed to FOD (screwdrivers, mobile phone etc.) jamming the elevator controls

Although it is not mandatory yet, the AWAL DSA, CEO and Board highly recommend the installation of the rear fuselage FOD barrier.

It can be as easy as gluing a Stits or Ceconite cover over the frame behind the rear seat or making a canvas cover and using press studs to hold in place. This would be concidered to be a modification that is 'not Major' (CASR 132.020) and does not require any formal Engineering order from a Sub-part 21M engineer.

I would recommend a discussion with your Maintenance provider. For further information you can also contact Cameron Rolph-Smith, Performance Aero (AWAL Board member), 0409 052681, cameron@performanceaero.com.au or Nigel Arnot, Ultimate Aero, 0437 767800, nigel@ultimateaero.com.au