IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2021 001719

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

*Section 67 of the **Coroners Act 2008***

Findings of:	Coroner David Ryan
Deceased:	Charles Earl Swanson
Date of birth:	17 June 1968
Date of death:	4 April 2021
Cause of death:	1(a) Multiple injuries – aviation incident
Place of death:	320 Koo Wee Rup Road, Koo Wee Rup, Victoria, 3981
Keywords:	Recreational aviation, microlight aircraft, approved configuration

INTRODUCTION

1. On 4 April 2021, Charles Earl Swanson was 52 years old when he suffered fatal injuries after a microlight aircraft he was flying crashed in Koo Wee Rup. At the time of his death, Mr Swanson lived in Burwood. He is survived by his wife, Joanna, and his daughters, Edie and Jemma.

BACKGROUND

2. Mr Swanson had an interest in flying and he owned a microlight aircraft. He stored his aircraft in a hanger on a property in Koo Wee Rup owned by his friends, Mark and Penny Rindel. Mr Rindel also owned microlight aircraft, and he and Mr Swanson often went flying together from the Koo Wee Rup property.[1]

3. A microlight is a light sport aircraft which consists of a propellor-driven tricycle pod (**trike base**) suspended below a fabric flex-wing. Like hang gliders, they are weight-shift controlled. The propeller is usually mounted at the rear of the aircraft behind the pilot's seat. The trike base and wing can be easily separated for transport and maintenance.

4. The Sports Aviation Federation of Australia (**SAFA**) is the sporting body that administers microlight aircraft in Australia under Civil Aviation Authority (**CASA**) Regulations and Orders.[2] It is responsible for the registration of microlight aircraft and the training and certification of pilots. It also has a role in accident investigation.

5. Owners of light sport aircraft must only carry out modifications that have been approved by the manufacturer. Modifications carried out without the approval of the manufacturer invalidate the Special Certificate of Airworthiness which is required to be issued by CASA.[3]

THE CORONIAL INVESTIGATION

6. Mr Swanson's death was reported to the Coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (**the Act**). Reportable deaths include deaths that are unexpected, unnatural or violent or result from accident or injury.

7. The role of a coroner is to independently investigate reportable deaths to establish, if possible, identity, medical cause of death, and surrounding circumstances. Surrounding circumstances

[1] Statement of Mark Rindel dated 4 April 2021; Statement of Penny Rindel dated 3 May 2021.
[2] safa.asn.au
[3] case.gov.au/aircraft/sport-aviation/light-sport-aircraft.

are limited to events which are sufficiently proximate and causally related to the death. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

8. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

9. Victoria Police assigned an officer to be the Coroner's Investigator for the investigation of Mr Swanson's death. The Coroner's Investigator conducted inquiries on my behalf, including taking statements from witnesses – such first responders, the forensic pathologist, regulators and investigating officers – and submitted a coronial brief of evidence.

10. Section 7 of the Act provides that a coroner should liaise with other investigative authorities, official bodies or statutory officers to avoid unnecessary duplication of inquiries and investigations.

11. This finding draws on the totality of the coronial investigation into the death of Mr Swanson including evidence contained in the coronial brief. While I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity. In the coronial jurisdiction, facts must be established on the balance of probabilities.[4]

MATTERS IN RELATION TO WHICH A FINDING MUST, IF POSSIBLE, BE MADE

Circumstances in which the death occurred

12. On 4 April 2021 at around 5.00am, Mr Swanson attended Mr and Mrs Rindel's property in Koo Wee Rup. He and Mr Rindel replaced a fuel pump on Mr Swanson's aircraft before they both prepared to go flying. The weather was clear, with early morning fog lifting, and there was no wind.[5]

13. The aircraft owned by Mr Swanson was an Airborne Windsport Edge trike T2-2903. It had been registered with SAFA. Mr Swanson also had a valid licence issued by SAFA.[6] There is

[4] Subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about, individuals unless the evidence provides a comfortable level of satisfaction as to those matters taking into account the consequences of such findings or comments.

[5] Statement of Mark Rindel dated 4 April 2021; Statement of Penny Rindel dated 3 May 2021.

[6] Statement of Ken Jelleff dated 27 April 2021.

no evidence that the aircraft had been issued with a Special Certificate of Airworthiness by CASA.

14. At some stage prior to his flight on 4 April 2021, Mr Swanson had modified his aircraft so as to configure the trike base owned by him with a wing owned by Mr Rindel. The wing (Aeros Still 17 TL) was from an Aeros Cross Country T2-6351 microlight aircraft registered with SAFA under Mr Rindel's name. This modification had not been approved by the manufacturer of Mr Swanson's aircraft and there is no evidence that SAFA had been advised.[7]

15. Mr Rindel stated that Mr Swanson had purchased a used Aeros Still 17 TL wing and fitted it to his aircraft "*quite some time ago*" because he found that it was "*better than the wing his aircraft was originally equipped with*". Mr Rindel further stated that at some stage this wing had been damaged and Mr Swanson was "*looking for a replacement*" and he let Mr Swanson have the Aeros Still 17 TL wing owned by him on the "*understanding that he would pay when he could*". There is no evidence of the existence of any documentation to support the sale of Mr Rindel's wing to Mr Swanson. Mr Rindel stated that he had seen Mr Swanson fly his aircraft configured with this wing on previous occasions.[8]

16. At some stage prior to 7.00am on 4 April 2021, Mr Swanson took off in his microlight aircraft from a runway on the Koo Wee Rup property. Mr Rindel had told his wife that Mr Swanson was taking his aircraft for a "*test flight*" but she was "*not sure what he was testing*". Mr and Mrs Rindel did not see him take off but they heard a "*bang*" soon afterwards. Mr Rindel "*looked up and saw the rear of the wing severely damaged around the trailing edge. The aircraft pitched and stalled, then dived down*". Mrs Rindel observed that Mr Swanson was about 40 to 50 metres in the air and it appeared to her that he was "*scrambling, pulling and trying to control the bar…I thought I saw something get caught in the propeller, breaking it apart*".[9]

17. Mr Swanson hit the ground with his aircraft. Mr Rindel ran to attend to Mr Swanson but he found him to be unresponsive and Mrs Rindel contacted emergency services. Mr Rindel observed that Mr Swanson's helmet was not on his head and he subsequently located it in the field some distance from the aircraft. It was significantly damaged. In his statement to police he reported, "*that was when I knew his helmet had gone through the propeller*". He further stated that Mr Swanson's "*helmet must not have been clipped up under his chin or plugged in*

[7] Statement of Ricky Duncan dated 17 August 2021.
[8] Email from Mark Rindel to the Coroners Court dated 2 December 2022.
[9] Statement of Mark Rindel dated 4 April 2021; Statement of Penny Rindel dated 3 May 2021.

to the base. I'm 100% sure of it" otherwise "*it wouldn't have come off on take off and went through the propeller*".[10]

18. Ambulance Victoria, Victoria Police and Fire Rescue Victoria attended the scene and Mr Swanson was declared deceased at 7.02am.

Identity of the deceased

19. On 8 April 2021, Charles Earl Swanson, born 17 June 1968, was identified via fingerprint identification pursuant to a determination of Coroner Peterson.

20. Identity is not in dispute and requires no further investigation.

Medical cause of death

21. Forensic Pathologist Dr Paul Bedford from the Victorian Institute of Forensic Medicine (**VIFM**) conducted an examination and provided a written report of his findings dated 9 April 2021.

22. Dr Bedford observed on a post-mortem computed tomography (**CT**) scan that Mr Swanson had suffered complex facial and posterior skull fractures, a chip fracture of the cervical spine, numerous bilateral lower limb and pelvic fractures and bilateral rib fractures.

23. Toxicological analysis of post-mortem samples did not identify the presence of any alcohol or any commons drugs or poisons.

24. Dr Bedford provided an opinion that the medical cause of death was 1 (a) Multiple injuries – aviation incident.

25. I accept Dr Bedford's opinion.

SAFA INVESTIGATION

26. On 27 April 2021, the wreckage of Mr Swanson's aircraft was inspected by Ken Jelleff on behalf of SAFA and Darren Barnfield of Recreational Aviation Australia (**RAAus**). Mr Jelleff prepared a report after their examination which is contained in the coronial brief.[11]

[10] Statement of Mark Rindel dated 4 April 2021.
[11] Statement of Ken Jelleff dated 27 April 2021.

27. Mr Jelleff observed that the cockpit section of the trike base had been completely destroyed by impact with the ground and that the "*propeller was also substantially damaged with blades broken and some sheared off close to the hub, indicating it was spinning at high speed at the time of impact*".

28. Mr Jelleff also noted that *the* "*Propeller Hub and bolts showed evidence of a crushing force being applied around the hub, caused by one, or both, of the Rear Cables of the Trike base wrapping around the Propeller Hub at high energy load*".

29. Mr Jelleff further observed that the rear cables from the aircraft's wing had been severed and were "*badly frayed and partially crushed, displaying signs of coiling, consistent with having been struck by, and then wrapped around the propeller hub at high speed*".

30. The airspeed indicator had locked at 86 knots, which Mr Jelleff considered was the likely airspeed the aircraft was travelling when it hit the ground, noting that the airspeed limit for that aircraft type was 59 knots. Further, the trailing edge of the wing appeared intact, "*with no visible shredding from shards of propellor*".

31. Mr Jelleff noted that the wing on Mr Swanson's aircraft was registered and linked to an Aeros Cross Country microlight aircraft manufactured in Ukraine and that the configuration of the trike base and wing had not been certified to be flown as a single unit. He stated that "*Microlight Aircraft can only be legally and safely flown in the configuration designed, tested and certified by the manufacturer. Not all Microlight Wings are compatible with different Trike Bases…Crucial design characteristics, including Aircraft Weights, and Swing Through clearance parameters between Rear Cables and propeller tips are all taken into consideration during the testing and certification of the combination of Wings with Trike Bases*".

32. In order to rule out the possibility of whether the propellor on Mr Swanson's aircraft came into contact with the wing cables, Mr Jelleff stated that it would be necessary to conduct a test with intact and operational components of an Airborne Windsport Edge trike base configured with an Aeros Cross Country wing.

33. Mr Barnfield and Mr Jelleff advised Senior Constable Douglas that it was likely that the wires on the aircraft "*had become ingested in the propeller, causing it to rip apart*".[12]

[12] Statement of Senior Constable Samuel Douglas dated 1 October 2021.

FINDINGS AND CONCLUSION

34. Pursuant to section 67(1) of the Act I make the following findings:

    a) the identity of the deceased was Charles Earl Swanson, born 17 June 1968;

    b) the death occurred on 4 April 2021 at 320 Koo Wee Rup Road, Koo Wee Rup, Victoria, 3981, from multiple injuries sustained in an aviation incident; and

    c) the death occurred in the circumstances described above.

35. The evidence does not enable me to find the exact sequence of events which caused Mr Swanson's aircraft to crash soon after take-off on 4 April 2021. However, I am satisfied that at some stage after leaving the ground, the rear cables from the wing have come into contact with the propellor of the aircraft, which has then caused significant damage to the propellor and its hub. It is possible that during this process, Mr Swanson's helmet has become damaged and dislodged. There is no evidence that Mr Swanson experienced a medical event which contributed to the incident.

36. Flying microlight aircraft safely requires compliance with relevant safety regulations and certification requirements. I am satisfied that the configuration of Mr Swanson's aircraft had not been approved by the manufacturer.

RECOMMENDATIONS

Pursuant to section 72(2) of the Act, I make the following recommendations:

(i) That the Sports Aviation Federation of Australia consider circulating to its members a safety notice which reinforces the importance of operating microlight aircraft only in the configuration that has been approved by the manufacturer.

I convey my sincere condolences to Mr Swanson's family for their loss.

Pursuant to section 73(1A) of the Act, I order that this finding be published on the Coroners Court of Victoria website in accordance with the rules.

I direct that a copy of this finding be provided to the following:

Joanna Swanson, Senior Next of Kin

Senior Constable Samuel Douglas, Coroner's Investigator

Sports Aviation Federation of Australia

Civil Aviation Authority

Signature:

Coroner David Ryan

Date : 26 April 2023

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.