# Aviation Safety Summary

July – September 2020

CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

# Introduction

Welcome to the Aviation Safety Summary Report for the spring quarter of 2020, covering the period 1 July to 30 September. This report provides a summary of aviation safety in the period and an overview of the long term safety performance within each aviation sector. The report examines performance in each of the three principal sectors that the Civil Aviation Authority uses to characterise flying activity.

- Commercial Passenger (Air Transport & Part 115 operations)
- Commercial non-passenger operations (including agricultural operations), and;
- Private or recreational operations.

The long term safety performance trends are included to provide context to the recent accidents. The number of accidents over the short term is highly variable and the CAA uses the long term performance of a sector as guide to selecting an appropriate regulatory response.

More than half the accidents in this quarter occurred within the private and recreational sector and all involved sport aircraft in various landing scenarios. Fortunately, these occurred without serious injury. Commercial flight training sector suffered one fatality during a night solo exercise.

In the quarter to December 2019 there were no accidents in the commercial passenger transport sector. The 3-year average accident rate for this sector has continued to decline and now sits at 0.74 accidents/100,000 flying hours. This is a reduction of nearly 50% since June 2012 and in 2019 this sector recorded its lowest accident rate in 10 years. Of course, in statistics we say ‘correlation does not imply causation’, and this reduction is due to the concerted effects of many people within industry and CAA.

Safe Flying,

Joseph Dewar

**Manager Intelligence**

# Accident summary by sector

| *Sector* | *Year* | *Qtr* | *Accidents* | *Fatalities* | *Injuries* |
|---|---|---|---|---|---|
| *Commercial passenger transport* | 2020 | 3 | 3 | - | 1 |
| | 2019 | 3 | 3 | - | - |
| *Commercial non-passenger* | 2020 | 3 | 2 | - | - |
| | 2019 | 3 | 2 | - | - |
| *Agricultural aviation* | 2020 | 3 | 1 | - | - |
| | 2019 | 3 | 1 | - | - |
| *Private* | 2020 | 3 | 12 | 2 | 1 |
| | 2019 | 3 | 9 | 2 | 3 |

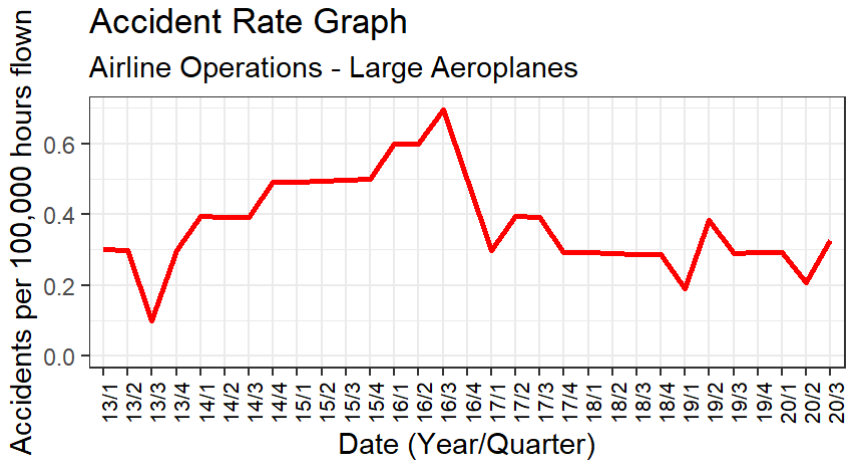
*Table 1: Accidents in quarter 3 sector, 2019 and 2020.*

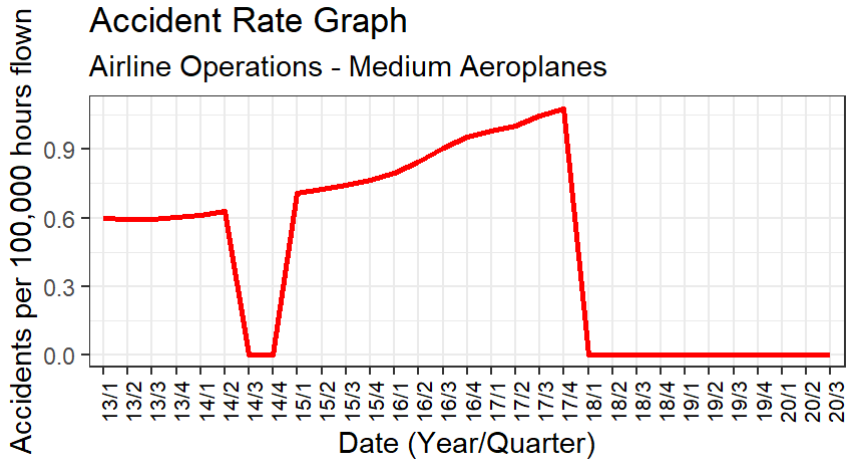
Between 1 July and 30 September 2020, there were 18 accidents, two fatalities and two injuries. This compares with 15 accidents, two fatalities and three injuries between 1 July and 30 September 2019.

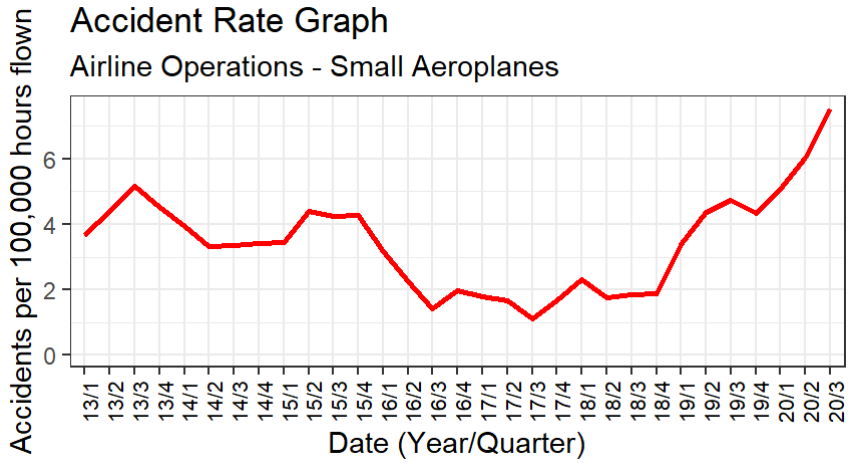
All major aviation sectors experienced at least one accident the quarter, ranging from relatively minor accidents that resulted in no injuries and little to no damage to aircraft, to serious fatal accidents. This report outlines each of these, and includes a brief update on the Authority's response.

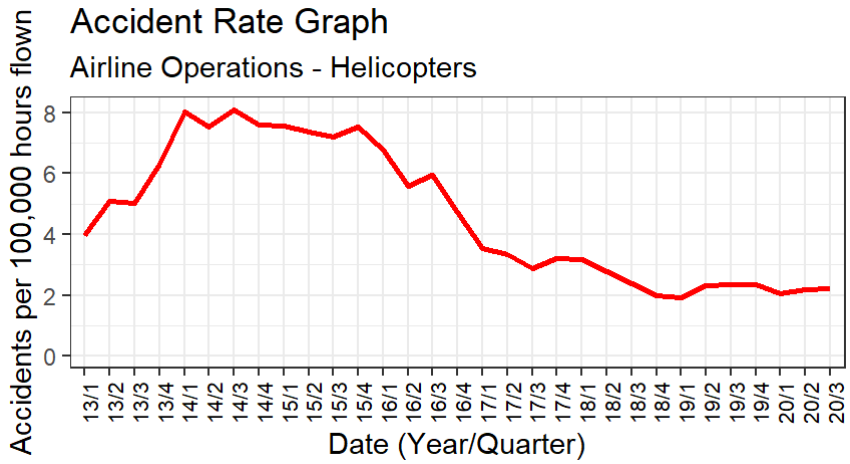
# Air Transport sector

## Accident rates






## Commentary

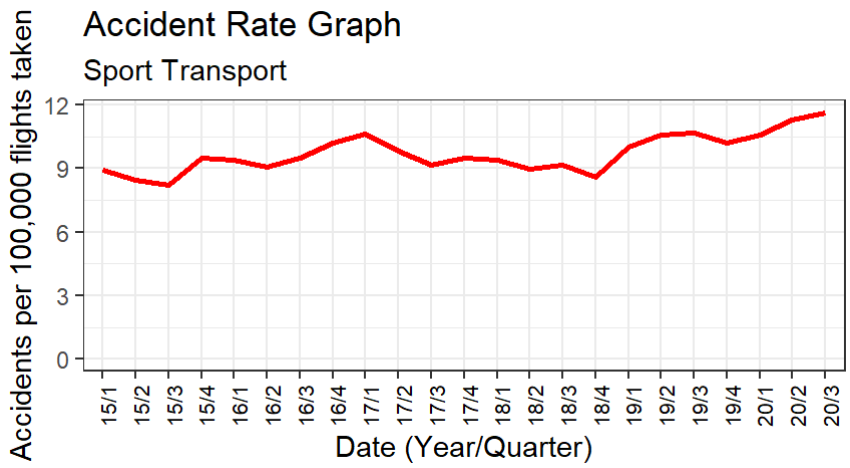
The accident rates among large and medium aeroplanes, as well as helicopters conducting passenger carrying operations have all improved since 2015. The accident rate among small aeroplanes has increased steadily since early 2019. Importantly, the small aeroplanes make up a very small portion of commercial passenger flight hours. This means that this accident rate is sensitive to changes in flight hours, as well as a small number of accidents.

## Accidents this quarter

| *Ref* | *Location* | *Aircraft model* | *Fatalities* | *Injuries* | *Description* |
|---|---|---|---|---|---|
| *20/4298* | Auckland | 787-9 | 0 | 0 | While disconnecting mobile stairs from the aircraft, the vehicle impacted with the left-hand horizontal stabiliser causing damage.<br>**CAA RESPONSE**: No immediate action. |
| *20/3964* | Auckland | 320B | 0 | 0 | Passenger aggravated a pre-existing injury while disembarking.<br>**CAA RESPONSE**: No immediate action. |

# Adventure Aviation sector

## Accident rates




## Commentary

We record the adventure aviation accident rate as the number of accidents per 100,000 flights, rather than hours of activity. This is because typical adventure flights are of short duration and the greatest risks are encountered at each end of the flight (as in landings for a parachutist, or a take-off by a paraglider or hang glider from a hilltop).

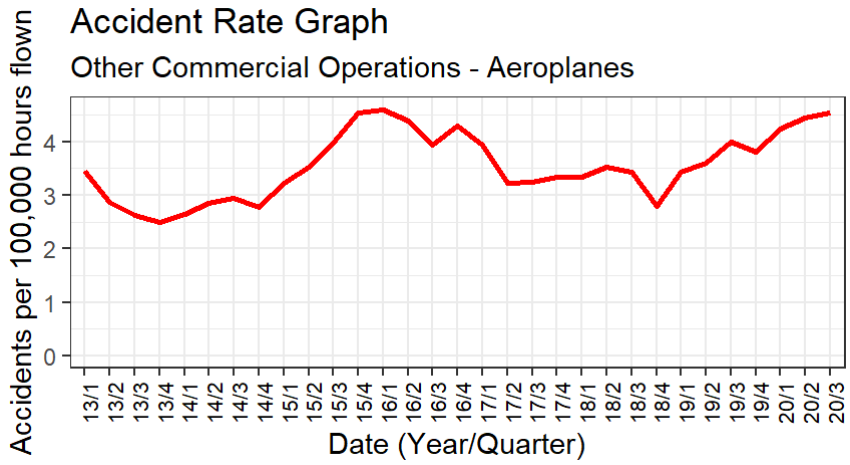
The accident rate in the adventure aviation sector has remained relatively steady since 2015, but has been increasing since late-2019.

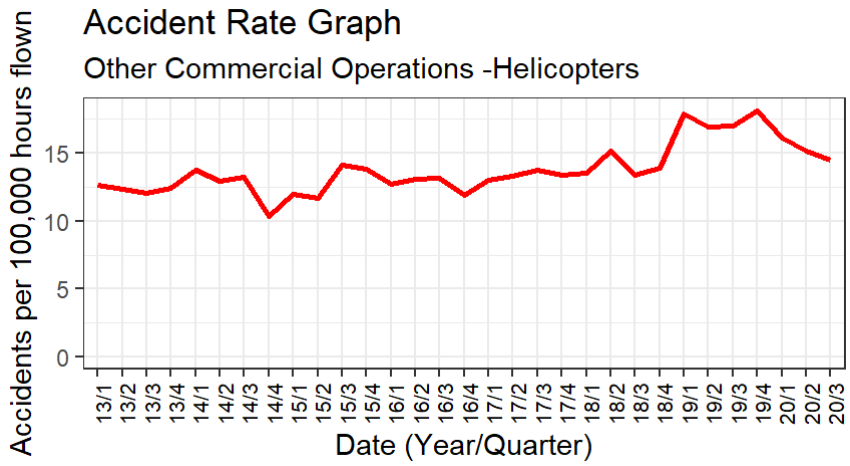
## Accidents this quarter

| *Ref* | *Location* | *Aircraft model* | *Fatalities* | *Injuries* | *Description* |
|---|---|---|---|---|---|
| *20/4024* | Taupo | Sigma Tandem | 0 | 1 | Passenger was injured shoulder during parachuting. They had had issues with the same shoulder, which were not disclosed.<br>**CAA RESPONSE**: No immediate action. |

# Commercial non-passenger operations

## Accident rates




## Commentary

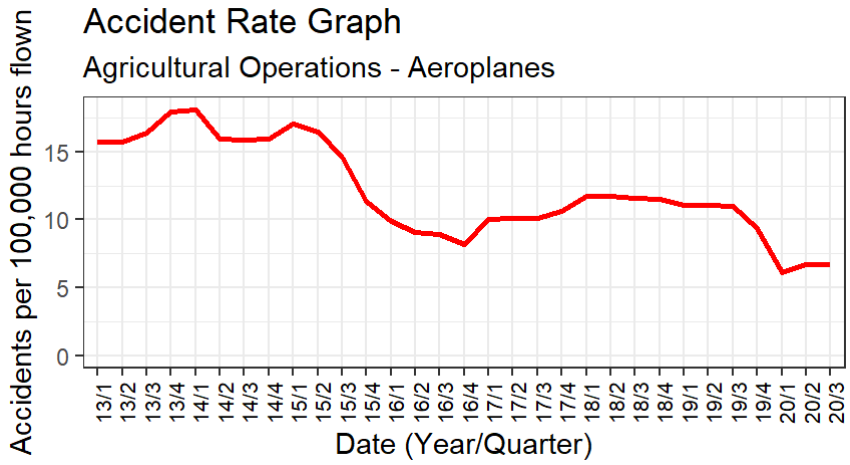
The accident rate for commercial non-passenger aeroplanes has been increasing since 2018, but remains low when compared to commercial non-passenger helicopters. The accident rate among commercial non-passenger helicopters has been decreasing since mid- to late-2019.

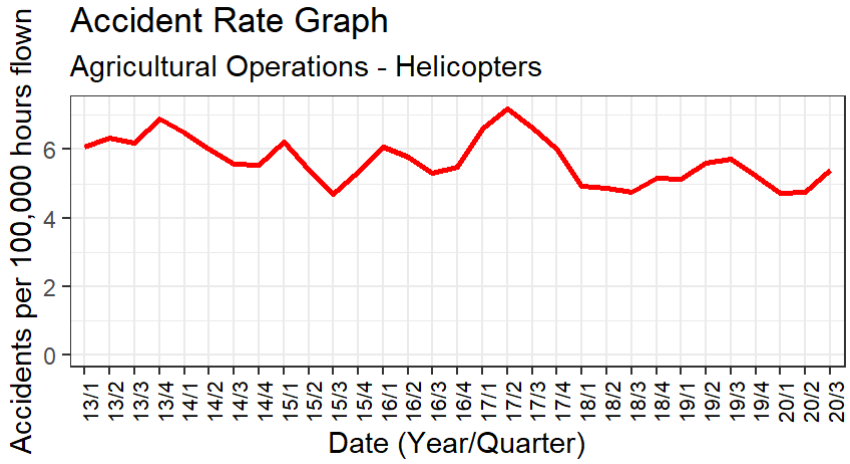
# Accidents this quarter

| *Ref* | *Location* | *Aircraft model* | *Fatalities* | *Injuries* | *Description* |
|---|---|---|---|---|---|
| *20/4163* | Kerikeri | P96 Golf UL | 0 | 0 | Aircraft landed heavily while under the control of a pupil. Damaged prop, undercarriage and lower engine fairing.<br>**CAA RESPONSE**: No immediate action. |
| *20/4543* | Whangarei | Texan Top Class | 0 | 0 | Aircraft porpoised on landing, resulting in the nose landing gear snapping and the propeller striking the ground.<br>**CAA RESPONSE**: After reviewing the occurrence, CAA has decided not to carry out further investigation. |

# Agricultural operations

## Accident rates




## Commentary

Agricultural operations are a part of the commercial non-passenger sector but are reported slightly separately. This acknowledges the unique set of risks faced by operators in this space.

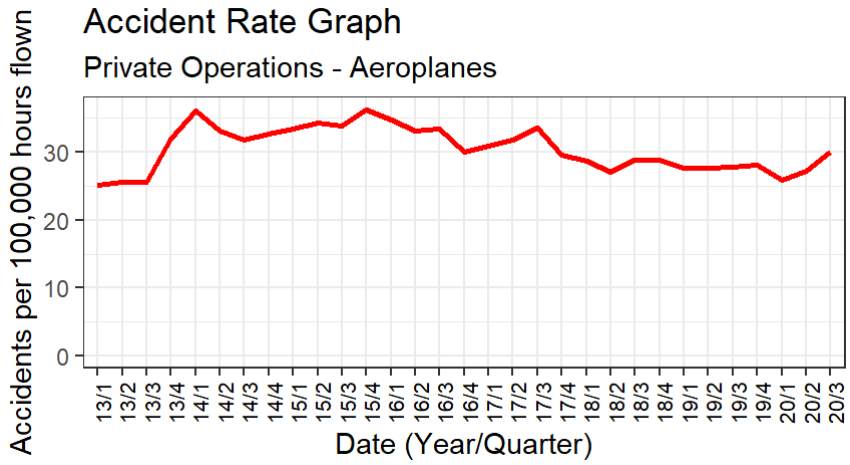
The accident rates among agricultural aeroplanes and agricultural helicopter have both decreased since 2013. There was an increase in the accident rate among agricultural helicopters between July and September 2020.

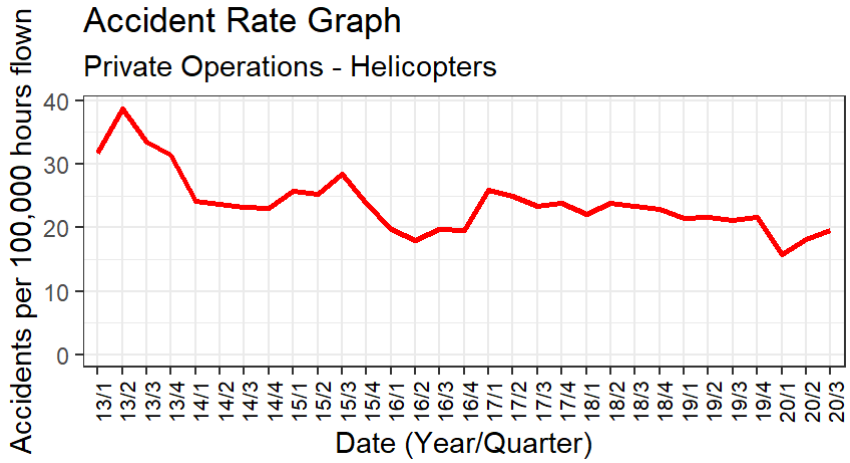
# Accidents this quarter

| *Ref* | *Location* | *Aircraft model* | *Fatalities* | *Injuries* | *Description* |
|---|---|---|---|---|---|
| *20/4486* | Alfredton | 269C | 0 | 0 | While undertaking agricultural operations, the aircraft struck terrain, damaging the landing gear and tail rotor drive shaft.<br>**CAA RESPONSE:** CAA has reviewed the occurrence. The operator was not yet Safety Management System certified (this was due to occur in early 2021). As part of this process, the CAA will assess the operator's internal processes, taking into account this occurrence. |

# Private and recreational operations

## Accident rate

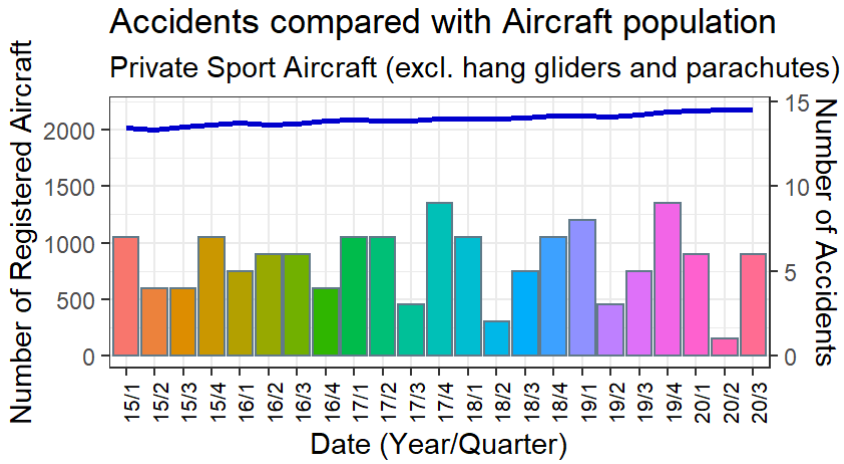


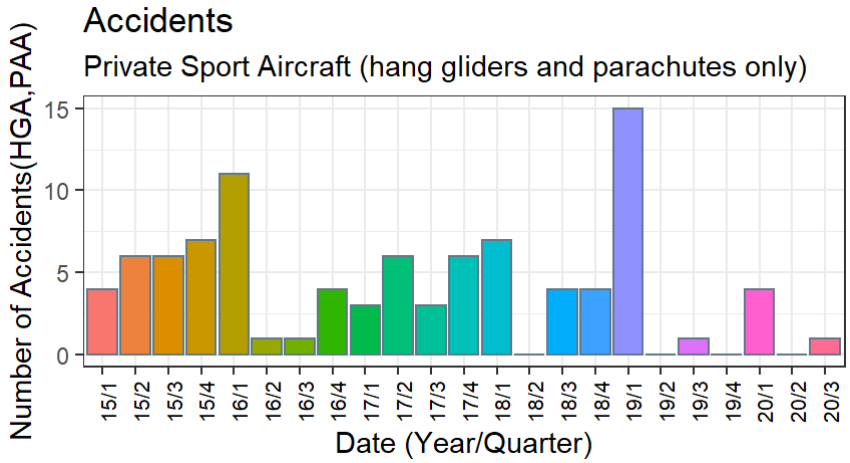




## Commentary

Among private and recreational operations, the accident rate among both aeroplanes and helicopters has increased for the past to consecutive quarters. This may be due to the decrease in flight hours that was observed due to COVID-19 lockdown (which meant that the accident rate became more sensitive to individual accidents).

Prior to 2020, the accident rate among private and recreational aeroplane and helicopter operators had been gradually improving.




# Commentary

The Authority reports accidents in the private sport aircraft sector by total number of accidents, rather than by accident rate. This is because private sport aircraft operators are not required to report their flight hours. Accidents among private hang gliders and parachutes are also reported separately as these aircraft are not registered, unless they are being used for commercial purposes.

Between 1 July and 30 September 2020, there were seven accidents among private sport aircraft operators. This is an increase from the previous quarter (1 March to 30 June 2020), which reflects the return of these operations after COVID-19 lockdown.

# Accidents this quarter

| *Ref* | *Location* | *Aircraft model* | *Fatalities* | *Injuries* | *Description* |
|---|---|---|---|---|---|
| *20/4461* | Wanaka | PA-28-140 | 0 | 0 | Hard landing resulting in the nose gear collapsing. Power was reduced too early.<br>**CAA RESPONSE**: CAA is reviewing this occurrence. |
| *20/3633* | Kaimanawa Ranges | 172D | 0 | 0 | Forced landing event. Through stress of weather, the aircraft inadvertently turned into the wrong valley. Unable to climb out of the terrain, the pilot made a controlled forced landing.<br>**CAA RESPONSE**: CAA is reviewing this occurrence. |
| *20/3997* | Timaru | A185F | 0 | 0 | While taxiing at the Timaru aerodrome, the aircraft right wheel struck a power box. There was no damage to the aircraft.<br>**CAA RESPONSE**: CAA has reviewed this occurrence. The power box has now been removed. |
| *20/4164* | Otaki | Sonex | 1 | 0 | Amateur-built aircraft appears to have crashed on landing. Sole occupant of aircraft was fatally injured.<br>**CAA RESPONSE**: Fatal accident investigation will take place. |
| *20/4519* | Fitzgerald Glade | Kitfox IV | 0 | 0 | Forced landing event. Aircraft experienced an engine failure in gliding distance of an airstrip. The aircraft bounced twice, causing one of the landing gear stubs to break from the gear leg. The landing gear leg then dug into the ground and the aircraft flipped on its back.<br>**CAA RESPONSE**: CAA has reviewed this occurrence. No mechanical fault with the aircraft was identified and there was 45 minutes of fuel remaining at the time of the engine failure. The main landing gear axle attachment was identified as a weak point, and newer aircraft have an improved design. |
| *20/3747* | Pukaki | Monoplane U/L | 1 | 0 | Fatal aircraft accident reported by the Rescue Co-ordination Centre NZ.<br>**CAA RESPONSE:** CAA is investigating this occurrence. |
| *20/4258* | Taylors Mistake | N/A | 0 | 1 | Pilot turned into wind to land and spun glider.<br>**CAA RESPONSE**: No immediate action. |

| *Ref* | *Location* | *Aircraft model* | *Fatalities* | *Injuries* | *Description* |
|---|---|---|---|---|---|
| *20/5773* | Karioitahi | N/A | 0 | 0 | Pilot unable to arrest turn on final approach. The right wing made contact with dunes.<br>**CAA RESPONSE**: No immediate action. |
| *20/4939* | Hastings | RV-12-UL | 0 | 0 | Experienced engine failure after take-off. Instructor landed the aircraft on grass beside the runway. As the grass was soft, the nose landing gear collapsed.<br>**CAA RESPONSE**: Investigation on hold, to resume in 2021. |
| *20/5779* | Raglan | N/A | 0 | 0 | Suspected wind shear resulted in sudden stall on final approach. Glider damaged.<br>**CAA RESPONSE**: No immediate action. |
| *20/4579* | Whangarei | CJ 1 Starlet U/L | 0 | 0 | Take-off accident. The aircraft did not get airborne after porpoising. The propeller struck the grass runway.<br>**CAA RESPONSE**: After reviewing the occurrence, CAA has determined that no further action is required. |
| *20/3532* | Wanaka | Magic GS-700 | 0 | 0 | Forced landing accident following engine failure. It was the aircraft's first flight since its engine rebuild. During landing flare, the aircraft experienced sunstrike, lost visual reference and made a hard landing.<br>**CAA RESPONSE**: CAA has investigated this occurrence. |