

New Zealand Flight Training Safety Report

October 2018



The following safety report provides information to the flight training sector on activity and safety performance of the flight training sector. Going forward we will endeavour to produce these Safety Reports on a six monthly basis. The next report will cover the second half of 2018 and will be released in early 2019.

Taking a 10 year view, there has been an overall decrease in accident and serious incident rates in the flight training sector. With the recent implementation of SMS across Part 141 organisations, it is hoped that these rates will decline further.

Please contact me if you have any questions or require further information on the content of this report.

Charlotte Rose

Regulatory Intelligence Analyst

Charlotte.rose@caa.govt.nz

Training Activity

Total reported training hours for both aeroplanes and helicopters combined are shown by quarter over the period 2007 to the end of the first half of 2018* in figure 1. It can be seen that there has been a decrease in flight training hours in both dual and solo training since 2009, but over the last 5 years, activity has been relatively stable. The first half of 2018 is so far tracking higher than 2017. Table 1 shows a breakdown of the total reported flight training hours by quarter.

*Reported training hours for the first half of 2018 are yet to be finalised therefore may be subject to change.

FIGURE 1: FLIGHT TRAINING HOURS BY QUARTER

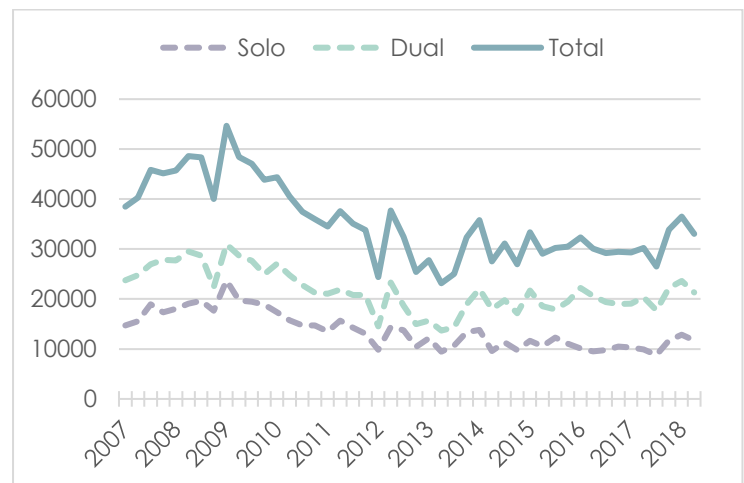


TABLE 1: FLIGHT TRAINING HOURS FOR AEROPLANE AND HELICOPTERS BY YEAR

Year	Dual Training	Dual % of Total	Solo Training	Solo % of Total	Total Training Hours
2007	103250	61%	66529	39%	169778
2008	108308	59%	74418	41%	182725
2009	112261	58%	81731	42%	193992
2010	95851	61%	62503	39%	158354
2011	84532	60%	56441	40%	140973
2012	71493	60%	48456	40%	119949
2013	62615	58%	45666	42%	108281
2014	76929	63%	44499	37%	121428
2015	77649	63%	45478	37%	123127
2016	81201	67%	39897	33%	121098
2017	79317	66%	40613	34%	119930
1st half 2018	44945	65%	24547	35%	69492

Licences Issued

In line with the downward trend in training hours flown, there has also been a steady decline over the past 7 years in the number of both fixed wing and rotary ATPL and CPL licences being issued. Commercial Helicopter Pilot Licences have seen the most pronounced decline over the last 6 years, but saw a slight increase in the last half of 2017. Fixed wing PPL issues dropped from 2011 to 2014, but have seen an increase over the last 3 years. Fixed wing CPL issues and rotary PPL issues have had an increase during the first half of 2018. The figures below show the number of both fixed wing and rotary pilot licences issued per year and quarter. Licence issue data is sourced from the CAA database.

FIGURE 2: TOTAL FIXED WING LICENCE ISSUES BY YEAR, TO DATE

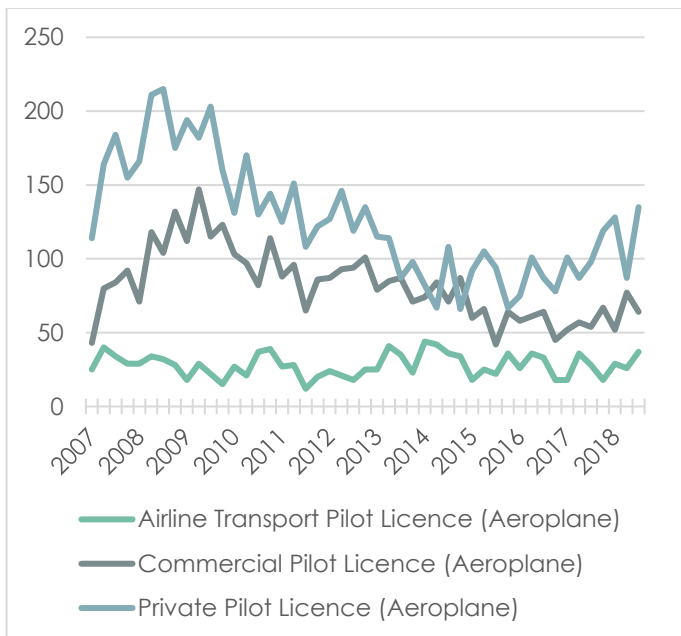
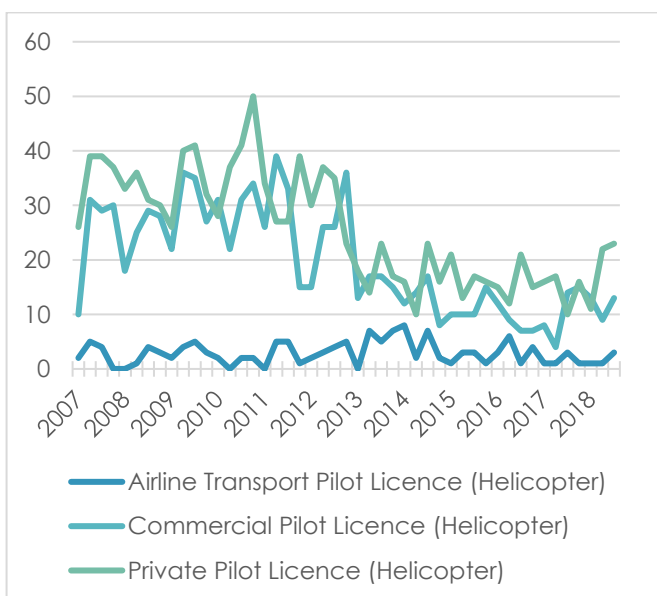


FIGURE 3: TOTAL ROTARY LICENCE ISSUES BY YEAR, TO DATE



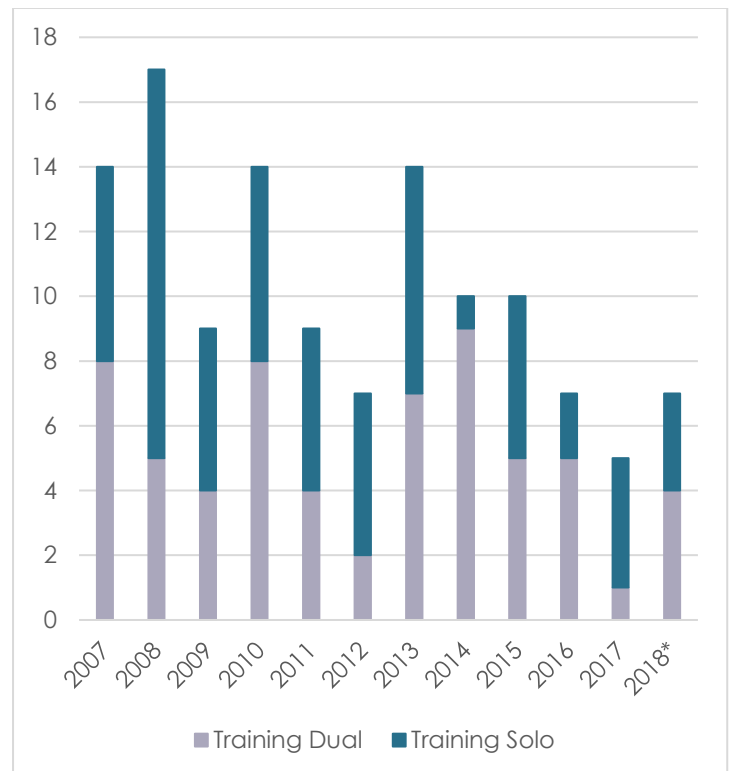
Safety Occurrences

In the second quarter of 2018 there were 166 occurrences reported to the CAA involving training flights. The most commonly reported occurrences were airspace occurrences involving solo training flights. These occurrences accounted for 58% of all training occurrences in Q2. There were no training accidents in quarter 2 that lead to injuries.

TABLE 2: REPORTED OCCURRENCES INVOLVING TRAINING OPERATIONS.

Occurrence Type	TRAINING DUAL	TRAINING SOLO
Accident	1	2
Aerodrome Incident	2	2
Airspace Incident	34	75
Defect Incident	15	7
Operational Incident	12	11

FIGURE 6: TOTAL REPORTED FLIGHT TRAINING ACCIDENTS PER YEAR, TO DATE



* First half of 2018 only.

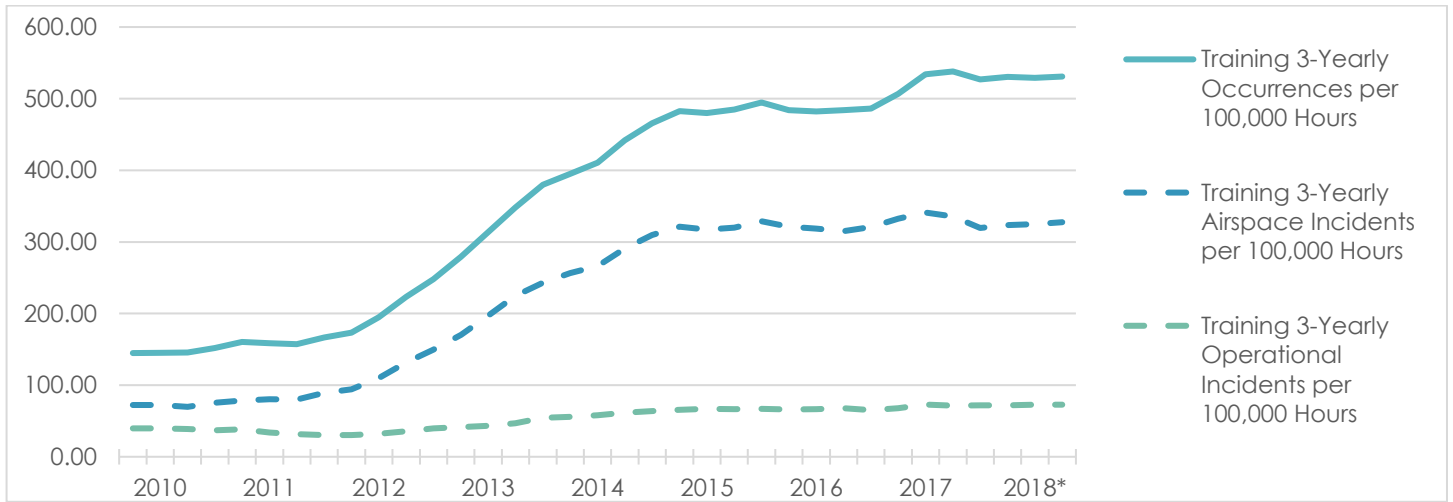
Occurrences Rates

Monitoring occurrence rates over time is an important way of tracking the safety performance of the sector.

The chart below shows the 3-yearly overall occurrence* rate per 100,000 training hours. The two most common types of training occurrence – airspace and operational incidents – are also shown by their 3-yearly rates per 100,000 training flight hours.

It can be seen the airspace incident rate has increased significantly since 2007, but has begun to level off over the last year. The operational incident rate however has remained relatively stable over the last 10 years.

*Occurrence data includes Accidents, Airspace Incidents, Aerodrome Incidents, Defect Incidents, and Operational Incidents



The following graphs show both **fixed wing and rotary** 3-yearly training (dual and solo combined) accident and incident** rates, per 100,000 hours. 2018 data is for the first half of the year only.

FIGURE 7: FIXED WING AND ROTARY ACCIDENT RATES

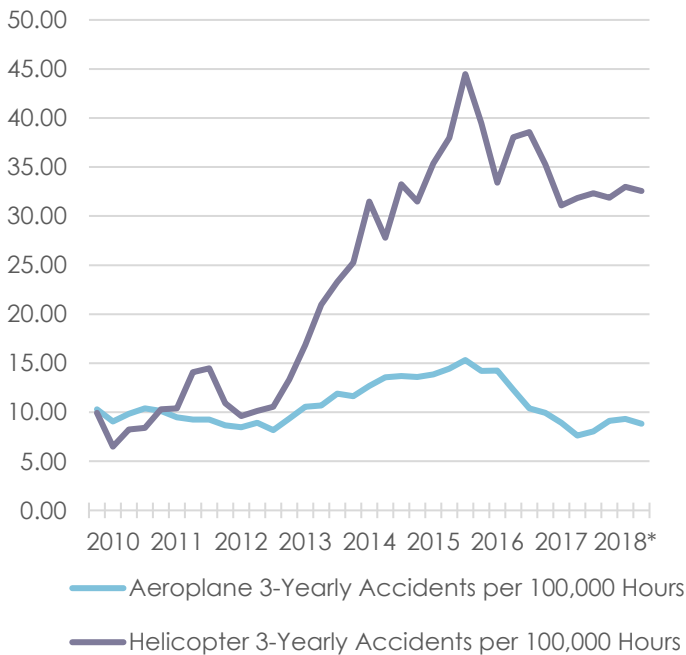
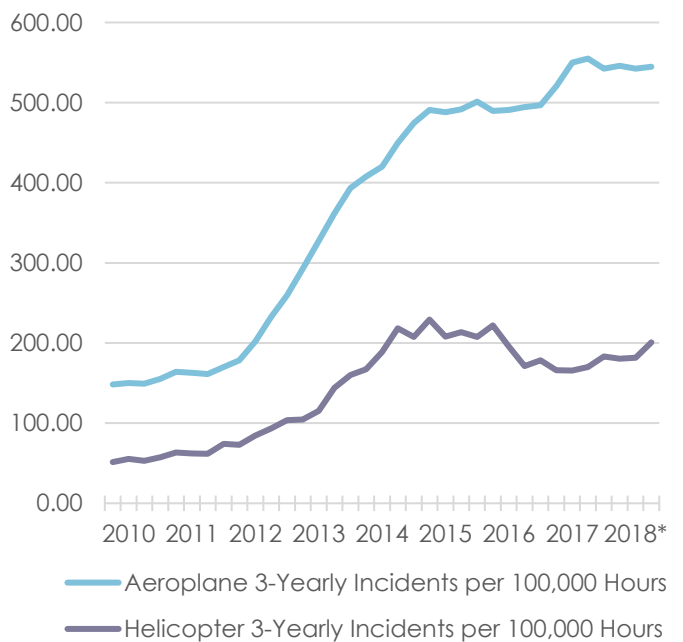


FIGURE 8: FIXED WING AND ROTARY INCIDENT RATES



**Incident Data includes Airspace Incidents, Aerodrome Incidents, Defect Incidents, and Operational Incidents

Occurrences



Below are some examples of occurrences reported to the CAA in quarter 2 2018, which highlight some key occurrence themes seen in the sector over this period. As you read these occurrences, consider: could this could happen to your organisation? What are or could you doing to prevent incidents like these?

Occurrence One – Directional Control

-  Solo Training
-  North Island
-  Cessna
-  Landing

Landing Accident. After touch down the student lost directional control, departed the runway and ground looped on the grass. There was substantial damage to the aircraft, however the student was not injured.

Occurrence Four – Sink

-  Dual Training
-  South Island
-  Cessna Skyhawk
-  Landing





On a short field landing the student reduced the power too quickly prior to the flare. The instructor took immediate control but could not arrest the high sink rate and the aircraft contacted the ground heavily and bounced. A go-around was carried out.

Occurrence Two – Navigation

-  Solo Training
-  North Island
-  Cessna Skyhawk
-  Cruise

ALERFA/VFR in IMC. Student called Bay App unsure of their position and in IMC. Immediate navigation assistance was provided and an ALERFA declared. The student was given assistance to find the road /railway line running North. When the pilot reported visual with those features he reported his intention to land. A successful landing was carried out and the ALERFA terminated.

Occurrence Three – Breach of Clearance

-  Solo Training
-  South Island
-  Cessna 152
-  Take off

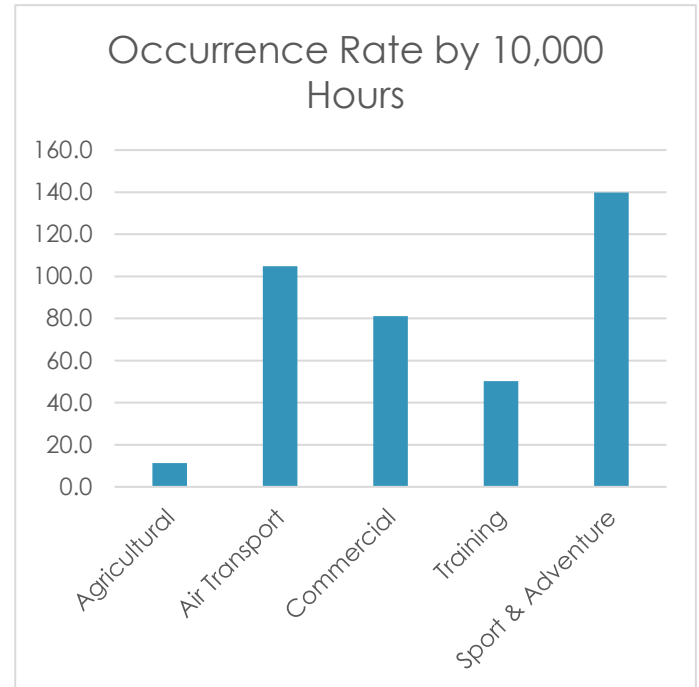
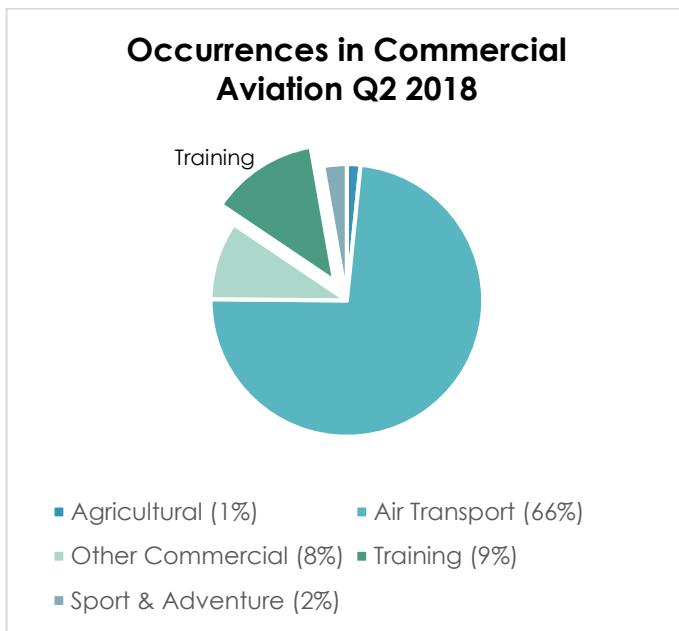
The student commenced take-off without clearance. Was given clearance to line up RWY02, leave the zone to the north 1500ft or below, which the pilot read back. The tower controller looked north-east to locate a C208 who was about to cross the upwind centreline, at 3000ft. On turning back the tower controller observed the 152 to be rolling at low speed, and instructed " stop immediately".

What does the safety performance of the training sector look like?

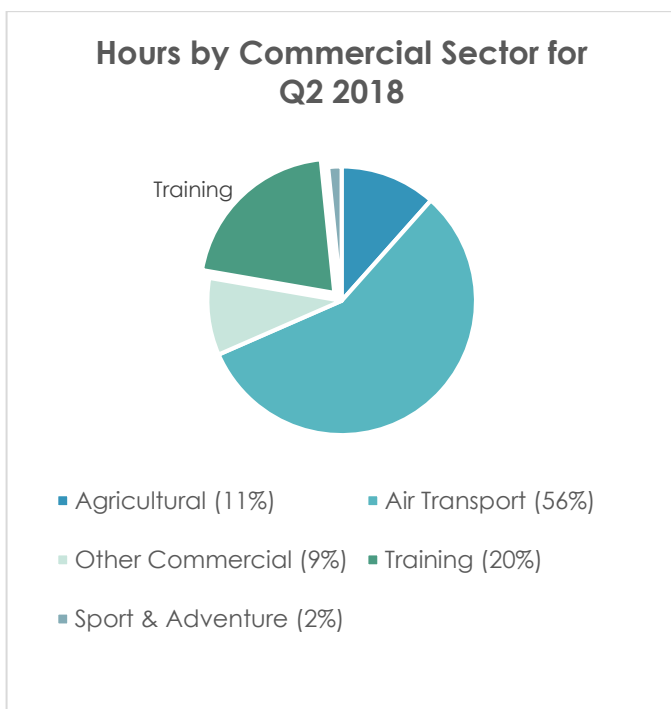


From 1 April 2018 to the 30th June 2018 there were 166 occurrences reported to the CAA involving training flights. This makes up 9% of all occurrences* in commercial aviation reported to the CAA in Q2 2018.

*Bird Strikes and Aviation Related Concerns are not included in this count.



Below is a breakdown of how activity is spread across the sectors, followed by a chart of occurrence rates by 10,000 hours, by sector.



In Q2 2018, the training sector had 20% of all flight hours reported, 9% of the occurrences. The training sector had the second lowest occurrence report rate of all commercial sectors.

Injuries and fatalities



There were no injuries or fatalities in the training sector in Q2 2018. In Q2, commercial aviation saw the highest number of fatalities and injuries combined.

Sector	Fatalities	Serious Injuries	Minor Injuries
Agricultural	-	-	-
Air Transport	-	-	1
Commercial	1	2	1
Training	-	-	-
Sport & Adventure	1	-	1