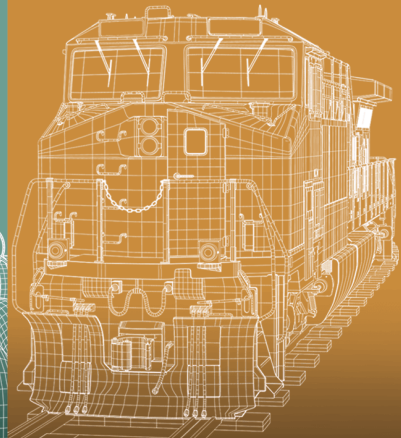
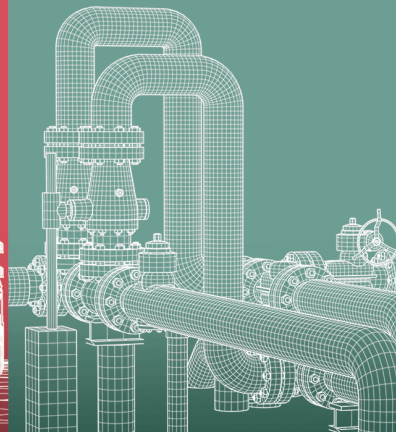




Transportation  
Safety Board  
of Canada

Bureau de la sécurité  
des transports  
du Canada



## STATISTICAL SUMMARY

# Air transportation occurrences in 2023

Canada 

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*Le présent rapport est également disponible en français.*

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## Executive summary

The TSB received 1020 reports of air occurrences in 2023 (182 accidents and 838 incidents), including 33 fatalities.

A total of 182 accidents were reported in 2023. This number is 10% higher than the previous year and 17% below the yearly average of 220 accidents reported in the prior 10 years, 2013 to 2022. Most (169) of the accidents in 2023 took place in Canada and involved Canadian-registered aircraft. In general, the number of air transportation accidents has decreased in the last decade.

The TSB recorded 19 fatal air transportation accidents involving 33 fatalities in 2023. This is down slightly from 2022 and is 24% below the average of 25 fatal accidents involving 40 fatalities over the ten years 2013 to 2022. Thirteen of the 33 air transportation fatalities in 2023 involved commercial operations. There were no fatalities involving airliner operations (CARs 705), or commuter operations (CARs 704) in 2023. The remaining 20 (of 33) fatalities in 2023 were linked to privately registered aircraft and involved recreational operators. Two accidents in 2023 involved a release of dangerous goods.

The 2023 overall air transportation accident rate of 2.8 per 100 000 aircraft movements is among the lowest recorded by the TSB since it began measuring accident rate by movements in 2004. This accident rate was calculated based on the 156 accidents (12% more than in 2022) in Canada involving Canadian-registered and foreign airplanes and helicopters (ultralights and other aircraft types are excluded), and the estimated 5 502 000 aircraft movements at Canadian airports (6% more than in 2022).

# Statistical summary

## Air transportation occurrences in 2023

The Transportation Safety Board of Canada (TSB) gathers and uses transportation occurrence<sup>1</sup> data during the course of its investigations to analyze safety deficiencies and identify risks in the Canadian air transportation system.

This statistical summary serves to describe the accident, incident, and injury counts that are presented in the included Tables. It provides limited discussion and some context but is not intended to be an in-depth analysis of the data.

It should be noted that certain characteristics of the data constrain statistical analysis and the identification of emerging trends. These include the small totals of accidents and incidents, the large variability in the data from year to year, and changes to regulations and definitions. The reader is cautioned to keep these limitations in mind when reading this summary to avoid drawing conclusions that cannot be supported by statistical analysis.

Throughout this document, there are instances where categories of occurrences sum to more than the total number of occurrences. For example, if a single occurrence involves an airplane<sup>2</sup> and a glider, the occurrence count will increase by one in each aircraft category but the occurrence itself will be counted only once in the total of occurrences.

The 2023 data were collected according to the reporting requirements described in the *Transportation Safety Board Regulations* in force during that calendar year.

The statistics presented here reflect the TSB Aviation Safety Information System (ASIS) database at 12 March 2024. Since the occurrence data are constantly being updated in the live database, the statistics may change slightly over time.

Also, as many occurrences are limited to data gathering, information recorded on some occurrences may not have been verified.

The following discussion refers to data tables contained in this document.

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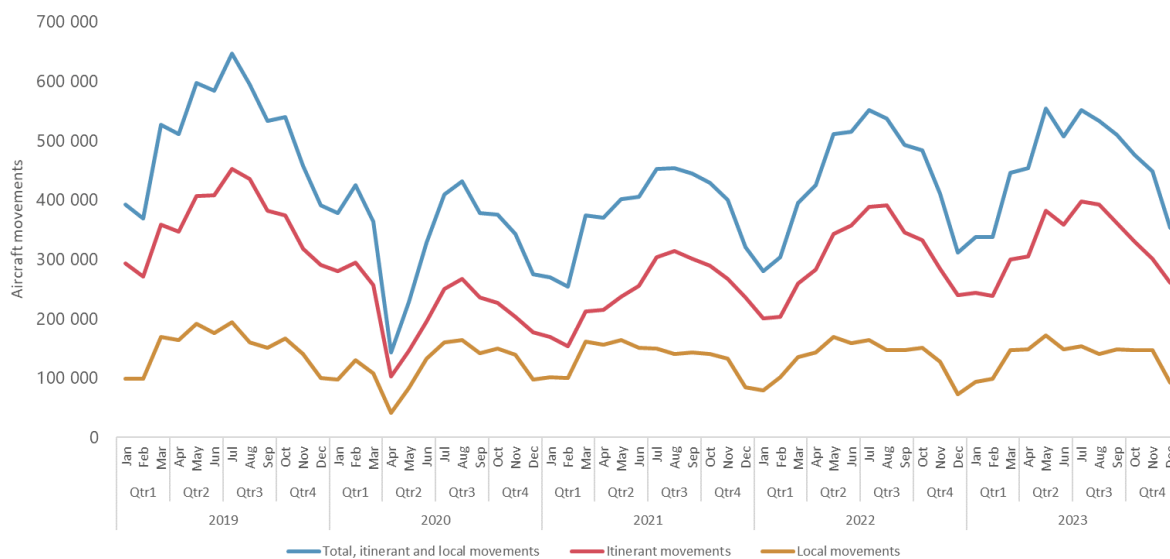
<sup>1</sup> See Definitions section.

<sup>2</sup> The term “airplane” is synonymous with Transport Canada’s term “aeroplane” and will be used throughout the document for simplicity.

# COVID-19 impacts on civil aviation in Canada.

Air transportation in Canada continued to rebound in 2023, after 3 years of significant disruption. Year-over-year demand for business and vacation travel increased and cargo activity remained high. Information collected by Statistics Canada indicates that total aircraft movements (take-offs and landings) at Canada's major and selected small airports numbered 5.5 million, which was 5.5% higher than in 2022 and represented 89.6% of the pre-pandemic movements in 2019. While activity at Canada's major and selected small airports is documented, it is difficult to estimate the amount of activity—commercial or private—at many small airports in Canada or off-airport entirely. Therefore, a full picture of activity in the aviation industry is lacking. Nonetheless, the activity patterns discussed here are indicative, and give partial context to the accident statistics presented in this document.

Figure 1. Total aircraft movements at major and selected small airports, by class (Source: Statistics Canada)<sup>3</sup>



<sup>3</sup> Statistics Canada. Table 23-10-0296-01 Aircraft movements, by class of operation, airports with NAV CANADA services and other selected airports, monthly. DOI: <https://doi.org/10.25318/2310029601-eng> (last accessed on 12 April 2024).

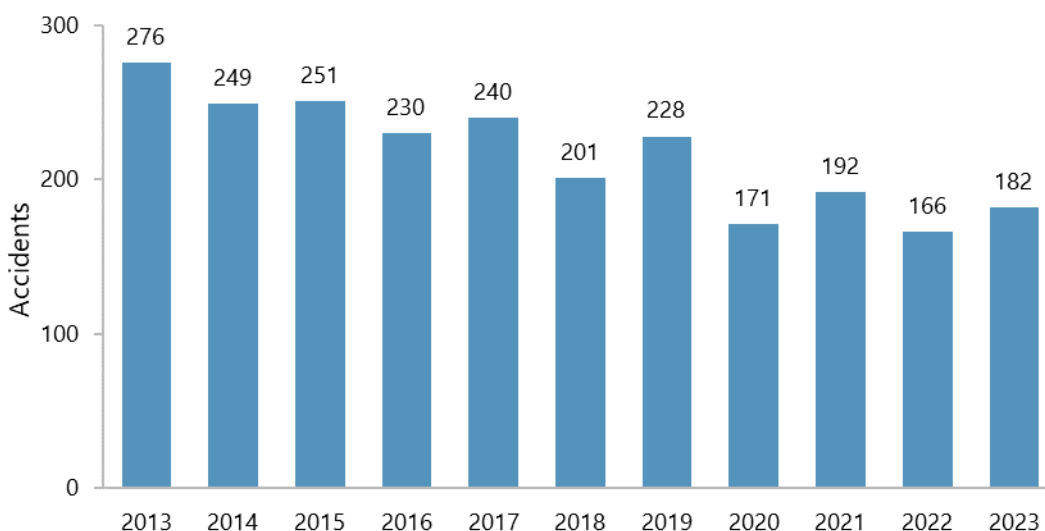
# Overview of accidents and fatalities

## Accident counts

Air transportation occurrences (both accidents and incidents)<sup>4</sup> are reportable to the TSB if they occur in Canada. Occurrences that take place outside of Canada are also reportable if they involve Canadian-registered aircraft, and meet the criteria laid out in the TSB Regulations.<sup>5</sup>

In 2023, a total of 182 air transportation accidents were reported to the TSB (Table 1 and Figure 2). This number is 10% higher than the previous year's total of 166 accidents and 17% below the yearly average of 220 accidents reported in the prior 10 years, 2013 to 2022. Most (169) of the accidents in 2023 took place in Canada and involved Canadian-registered aircraft. Seven accidents involving Canadian-registered aircraft took place outside Canada, and 6 accidents in Canada involved a foreign-registered aircraft. In general, the number of air transportation accidents has been decreasing in the last decade.

Figure 2. Reported air transportation accidents, 2013 to 2023.



There were 159 accidents involving Canadian-registered aircraft (excluding ultralights) in 2023 (Table 2). This is 9% above the 2022 count of 146 accidents, but 34% below the average of 193 accidents in the preceding 10 years (2013 to 2022). If the 17 accidents involving ultralights are included in the count, there were 176 accidents involving Canadian-registered aircraft in 2023.

<sup>4</sup> See Definitions section.

<sup>5</sup> *Transportation Safety Board Regulations*, at <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2014-37/index.html> (last accessed on 19 April 2024).

## Aircraft type

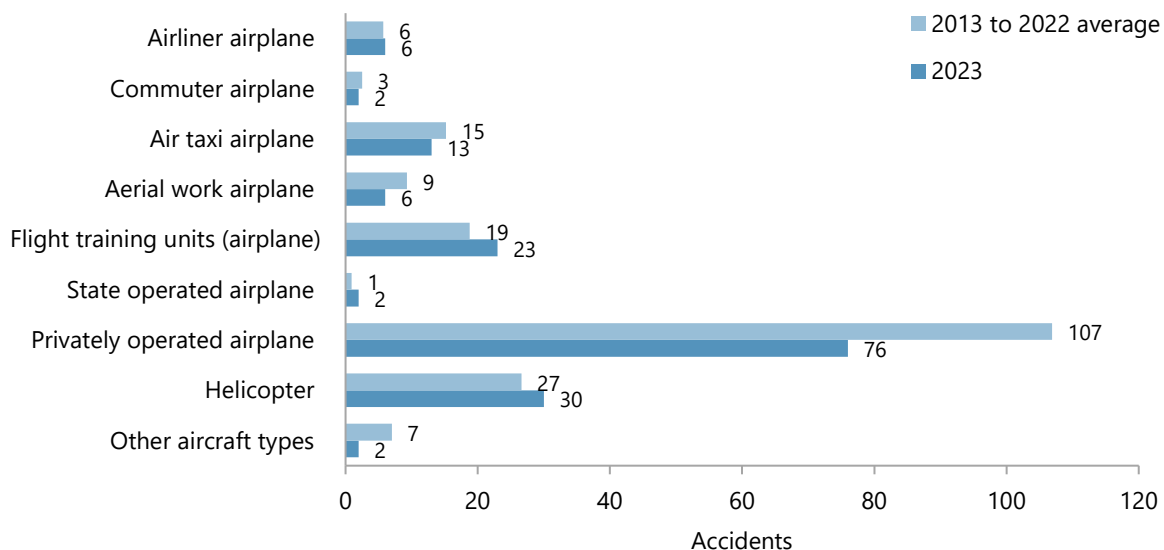
Of the 182 air transportation accidents reported to the TSB in 2023, 131 (72%) involved fixed-wing, powered airplanes (other than ultralights) (Table 1), 32 (18%) involved helicopters, 17 (9%) involved ultralights, and 2 accidents (1%) involved all other types of aircraft, such as balloons, gyroplanes, gliders, airships, hang gliders, or Unmanned Aerial Vehicles (UAVs). In the 10 years from 2013 to 2022, the average proportion of accidents involving each of these four categories of aircraft has remained constant: in each year, airplanes have been involved in roughly 75% of reportable accidents, helicopters in about 12%, ultralights in about 9%, and other aircraft in about 3%.

## Operator type

There were 77 accidents that involved commercially operated aircraft of all types in 2023 (Table 1). This is 38% more than the 56 such accidents recorded in 2022, and 6% above the average of 72 accidents recorded in the 10 years from 2013 to 2022.

Commercially operated Canadian-registered airplanes were involved in 50 accidents in 2023 (Table 2 and Figure 3). Of those, 6 involved operations under *Canadian Aviation Regulations* (CARs) Subpart 705 (airliners). This is greater than the 4 accidents involving Canadian-registered airliners in 2022, and the same as the average of 6 accidents per year recorded from 2013 to 2022.

**Figure 3. Accidents involving Canadian-registered aircraft, excluding ultralights, by aircraft type and operation type in 2023, compared with the 2013 to 2022 average.**



In 2023, there were 2 accidents involving a Canadian-registered commuter airplane operating under CARs Subpart 704 (Table 2), as well as 25 accidents involving air taxi operations (CARs Subpart 703)—13 involving airplanes and 12 involving helicopters. The 25 air taxi accidents are more than double those reported in 2022 (12) and are slightly above the average of 24 accidents per year occurring between 2013 and 2022. Flight training units operating under CARs Subpart 406 were involved in 25 accidents in 2023, of which 23 involved airplanes and 2 involved a helicopter. On average for the period 2013 to 2022, flight training units were involved in about 19 airplane and 1 helicopter accidents per year.



Overall, in 2023, 103 air transportation accidents involved non-commercial (i.e., private aircraft) operations (Table 1), compared to 108 in the preceding year. The 2023 total is 29% below the annual average of 144 accidents from 2013 to 2022. Of the 103 total accidents in the non-commercial (private aircraft) operations category, 76 involved Canadian-registered airplanes (Table 2), with 5 of these involving an airplane operating under CARs Subpart 604 having a Private Operator Registration Document (PORD).

Most operators of non-commercial (private) Canadian-registered aircraft are classified as recreational. Recreational operators are responsible for a significant amount of flying activity and tend to be involved in many accidents each year. In 2023, 92 accidents involved recreational operators of Canadian-registered aircraft—69 of them in fixed-wing airplanes (Table 2), 4 in helicopters, and 19 in other aircraft. These 92 accidents are 8% fewer than in the preceding year, and 31% fewer than the 10-year average number of accidents involving recreational Canadian-registered aircraft (134).

In addition to commercial and private operations, 2 accidents in 2023 involved State operators, and 1 accident was categorized as having another or unknown operation type (Table 1).

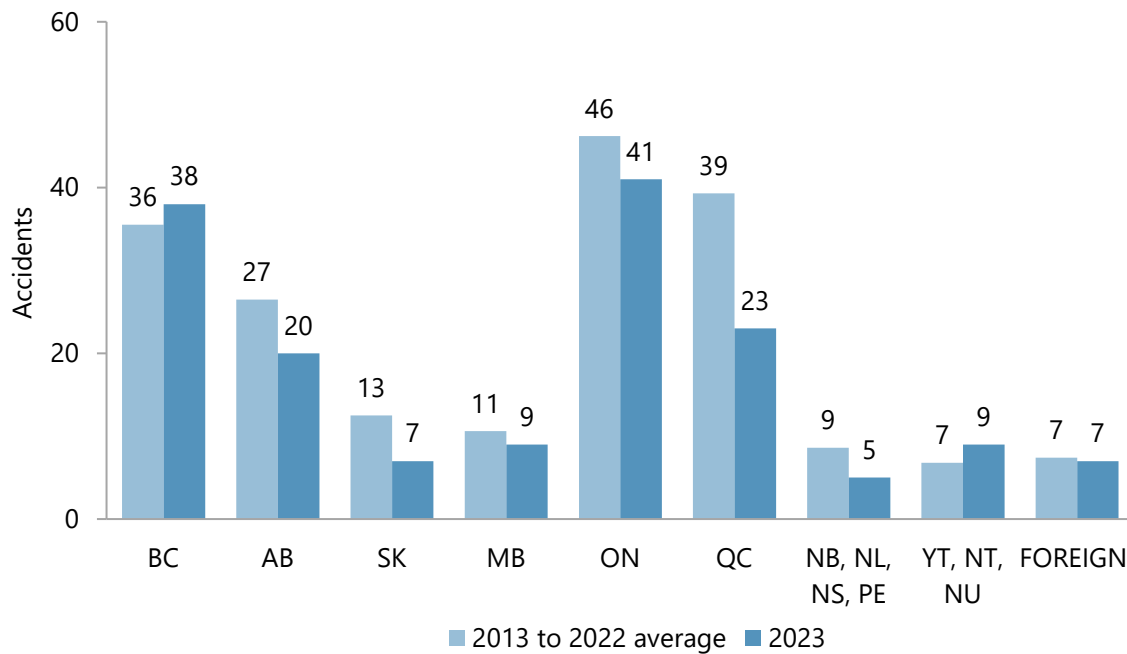
### **Province or territory**

Ontario and British Columbia had the largest number of reported accidents in 2023, with 44 reported accidents in each province (all aircraft types, including ultralights), surpassing Quebec with 32 accidents (Table 7). Ontario averaged more accidents per year (54) in the 2013–2023 period than any other province or territory, with Quebec having the second-largest average accident count (44).

Altogether, 7 accidents that were reportable under TSB Regulations occurred outside Canada in 2023. These all involved fixed-wing airplanes: 2 were operating commercially and 5 privately (data not presented). While these 7 accidents equal the number from 2022, they are fewer than the average of 8 per year seen over the previous ten years.

When ultralights are excluded from the counts, many provinces and territories saw fewer accidents reported in 2023 than the average of the previous 10 years (Table 8 and Figure 4). Only British Columbia, Northwest Territories, and Nunavut had more than the average number of accidents.

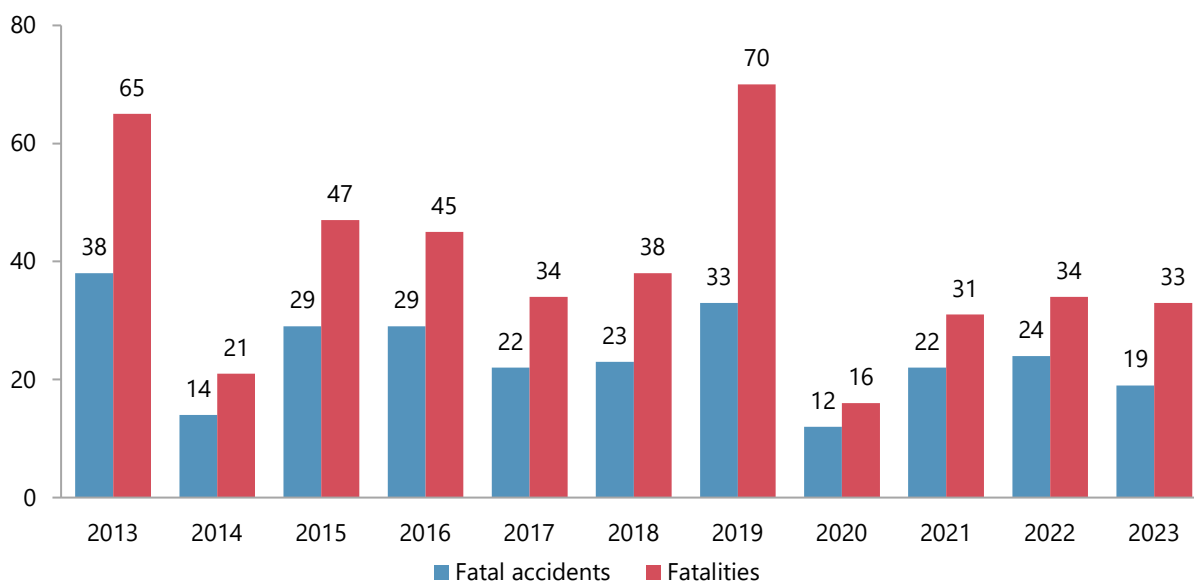
Figure 4. Air transportation accidents involving Canadian-registered aircraft, excluding ultralights, in 2023 compared with the 2013–2022 average, by province or territory.



#### Fatal accidents, fatalities, and serious injuries

The TSB recorded 19 fatal air transportation accidents resulting in 33 fatalities in 2023 (tables 1 and 4, and Figure 5). This is fewer than the 24 fatal accidents in 2022 and is 24% below the average of 25 fatal accidents over the ten years from 2013 to 2022. Of the 19 fatal accidents in 2023, 11 involved fixed-wing, powered airplanes, 4 involved helicopters, and 4 involved ultralight aircraft. All 19 of these occurrences involved Canadian-registered aircraft, with 18 occurring in Canadian airspace and one occurring in the United States (Table 7).

Figure 5. Fatal accidents and fatalities involving Canadian-registered aircraft, 2013 to 2023.



Thirteen of the 33 air transportation fatalities in 2023 involved commercial operations (Table 4): 4 of them under air taxi regulations (CARs 703), 4 under aerial work regulations (CARs 702), and 5 under flight training unit regulations (CARs 406). There were no fatalities involving airliner operations (CARs 705), or commuter operations (CARs 704). The remaining 20 fatalities were linked to privately registered aircraft and involved recreational operators. None of these involved an operator holding a Private Operator Registration Document (PORD) (CARs 604).

With regards to type of aircraft, 24 of 33 fatalities in 2023 resulted from accidents in fixed-wing powered airplanes, 5 from helicopter accidents, and 4 from ultralights (Table 4). Of the 33 total fatalities, 19 were pilots or crew members, 12 were aircraft passengers, and 2 were among persons on the ground.

Overall, 22 persons were seriously injured in aircraft accidents in 2023 (Table 5), which is 37% fewer than in 2022, and 25% below the average for the period 2013 to 2022. Seven persons were seriously injured in accidents involving commercial operations in 2023: none in airliners (CARs 705), 1 in a commuter aircraft (CARs 704), 3 in the air taxi sector (CARs 703), 2 in aerial work operations (CARs 702), and 1 with a flight-training unit (CARs 406). Also, during 2023, 13 persons incurred serious injuries in recreational operations. Two more people were injured in other operation types, including State-operated aircraft.

## Accident rate

### Accident rate as a key safety indicator

A key indicator of air transportation safety is the aircraft accident rate, which is calculated as the number of accidents per hours flown or per number of aircraft movements (a movement can be a takeoff or a landing). Analyzing trends of accident rates for different types of operators can signal emerging safety issues associated with specific operator types and activities.

Activity data (e.g., flight hours) broken out by operator type<sup>6</sup> are required to calculate accident rates that enable trend analysis of specific operator types over time, or support comparisons across operator types or geographical regions.

Until 2010, Transport Canada provided activity data broken out by operator type, and the TSB used these data to calculate and publish accident rates across operator types. From 2010 onward, Transport Canada no longer provided hours-flown activity data breakouts by operator type, because of its concerns regarding the accuracy of those data, which, for some operators that operated under more than one subpart of the CARs, were collectively reported only under the most restrictive CARs subpart. For 2023, Transport Canada was unable to provide any data about hours flown by Canadian-registered aircraft. As such, the TSB cannot calculate an accident rate for Canadian-registered aircraft by hours flown, either for the whole fleet or any part of it.

In 2019, Statistics Canada changed the way it collected data about aircraft movements at airports in Canada, and this report uses that information to provide a global accident rate for aircraft operating in Canada based on a survey of all major and selected minor airports in Canada. While this estimate includes the bulk of aircraft movements in Canada, there is a significant gap in our ability to measure activity that takes place at small airports or away from airports entirely.

Because movement data are currently not categorized by CARs subpart when tabulated by Statistics Canada, there is no differentiation between sectors (e.g., air-taxi operators, airline operators) or between different types of aircraft (e.g., airplane, helicopter, floatplane). Therefore, accident rates cannot be calculated for individual industry sectors.

Without hours-flown or movement data that are categorized by CARs subpart and aircraft type, it will be more difficult for sector stakeholders to assess risks and determine if mitigation strategies being carried out to improve safety are working.

Therefore, in 2019 the Board issued a recommendation, which remains active: the Board recommended that

the Department of Transport require all commercial operators to collect and report hours flown and movement data for their aircraft by *Canadian Aviation Regulations* subpart and aircraft type, and that the Department of Transport publish those data.

#### **TSB Recommendation A19-05**

### **Accident rate per 100 000 aircraft movements in Canada, for Canadian and foreign-registered aircraft**

Although an accident rate by *hours flown* is not available, it is possible to measure an accident rate by other means. Statistics Canada collects information about the number of *aircraft movements* that take place at major and selected small airports in Canada. While these data do not include all activity—activity at many small airports is not captured, nor is off-airport activity—it can serve as an indicator of system safety for the bulk of aircraft movements in Canada.

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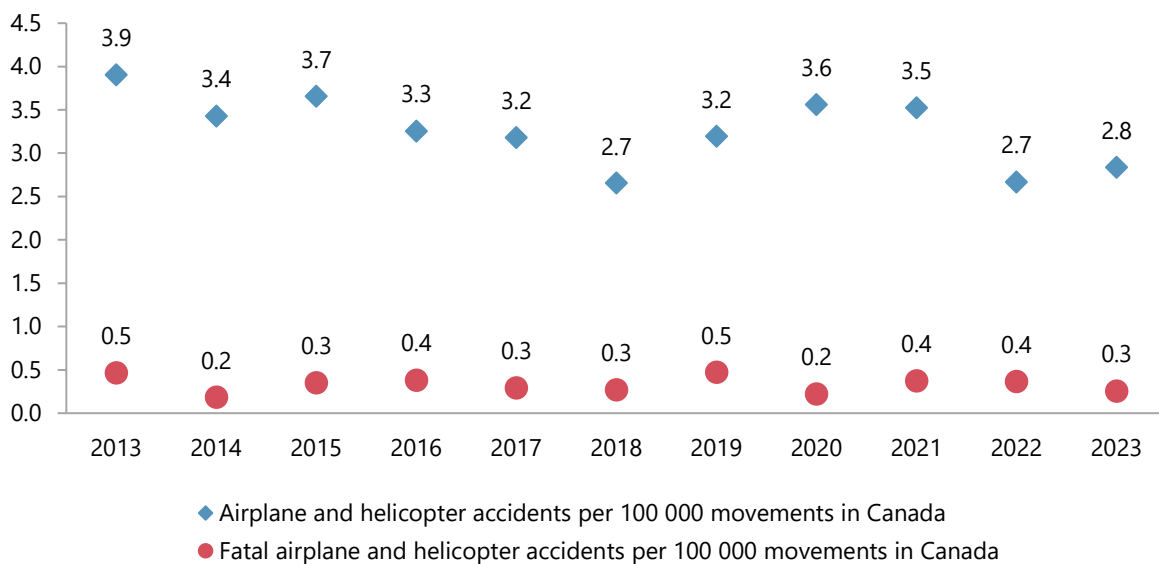
<sup>6</sup> The operator types in the CARs are: airline operations (Subpart 705), commuter operations (Subpart 704), air-taxi operations (Subpart 703), aerial work (Subpart 702), foreign air operations (Subpart 701), and private operators (Subpart 604).

### Overall accident rate

The 2023 overall air transportation accident rate of 2.8 per 100 000 aircraft movements (Table 3 and Figure 6) is among the lowest recorded by the TSB since it began measuring an accident rate by movements in 2004. This accident rate was calculated based on the 156 accidents (12% more than in 2022) in Canada involving Canadian-registered and foreign airplanes and helicopters (ultralights and other aircraft types are excluded), and the estimated 5 502 000 aircraft movements at Canadian airports (6% more than in 2022).

The accident rate has fallen from 3.9 accidents per 100 000 aircraft movements in 2013 to a low of 2.7 in both 2018 and 2022. To test whether the change in rate was statistically significant, Kendall's tau-b ( $\tau_b$ ) correlation was used to quantify the trend in accident rate. Kendall's  $\tau_b$  correlation coefficient is a nonparametric measure of the strength and direction of association that exists between two variables. Kendall's  $\tau_b$  was calculated on the 11-year series of accident rate values by year from 2013 to 2023. For the period represented in this Summary, any linear change in the accident rate was not statistically significant ( $\tau_b = -0.4182$ ,  $p = 0.0734$ ). However, it is worth noting that the accident rate had been consistently decreasing in the years leading up to the 2020 pandemic. During the pandemic, the accident rate rose, in part due to a drop in the number of aircraft movements at that time without a similar reduction in aircraft accidents.

Figure 6. Rate of accidents per 100 000 aircraft movements, by airplanes and helicopters in Canada



### Fatal accident rate

As shown in Figure 6, the fatal accident rate in 2023 was 0.3 per 100 000 aircraft movements. This rate was calculated based on 14 fatal accidents in Canada involving Canadian- and foreign-registered airplanes and helicopters in 2023 (ultralights and other aircraft types are excluded). The 2023 rate is less than the 2022 rate and equivalent to the 2013 to 2022 average. There is no statistically significant change in the fatal accident rate since 2013 (Kendall's  $\tau_b = -0.1273$ ,  $p = 0.5858$ ).

## Fatality rate

In 2023, the fatality rate was 0.5 per 100 000 aircraft movements (Table 3). This rate was calculated based on 27 fatalities that resulted from accidents in Canada involving Canadian- and foreign-registered airplanes and helicopters (excluding ultralights and other aircraft types). This fatality rate is similar to the previous year's rate and less than the average yearly rate of 0.6 between 2013 and 2022. There is no statistically significant trend in the fatality rate since 2013 (Kendall's  $\tau_b = -0.1636$ ,  $p = 0.4835$ ).

## Dangerous goods released

The TSB recorded 2 accidents in 2023 involving a release of dangerous goods (Table 1). This is below the average of 6 per year over the previous 10 years.

## Accident events and phases

For each reported accident, the TSB records one or more safety-significant events that occurred, and the phase of flight for each of these events. For example, if an airplane suffers engine power loss during takeoff (safety-significant event 1), and then returns to land and has a runway excursion during landing (safety-significant event 2), both events and their phase of flight will be recorded for statistical purposes. Tables 11 through 14 show how many accidents occurred for each event category and for each phase of flight from 2013 to 2023. Note that if a single accident involves more than one event within a phase of flight, that accident is only counted once in the phase total. Therefore, the total number of accidents for each event within a phase will not necessarily sum to the total number of accidents for a phase. For example, if an accident involves both "loss of control" and "power loss" events in the "takeoff" phase, then the accident is counted once in each event category within the phase, but only once in the overall phase total. Approximately 30% of accidents from 2013 to 2023 involved events in more than one phase of flight, so the number of accidents shown in the tables, and in Figures 7 and 8, sum to more than the total number of accidents.

Figures 7 and 8 and Tables 11 and 12 show the number of airplane and helicopter accidents by phase of flight during the period 2013 to 2023. The largest number of airplane accidents involve events that happen during the landing (1029) and takeoff (435) phases of flight (Table 11 and Figure 7). Similarly, helicopter accidents (Table 12 and Figure 8) have events that occur most often during the landing (144), manoeuvring<sup>7</sup> (80), and takeoff (60) phases of flight. Note that for airplanes, although the landing phase produces the largest outright number of accidents, fatal accidents happen most often during the en route (58) and takeoff (52) phases, not including post-impact events (Table 13 and Figure 7). For helicopters, the manoeuvring phase was associated with the largest proportion of fatal accidents (37 of 118, or 31%). Similarly, the en route (16) and manoeuvring (16) phases are linked to more fatal accidents in the 11-year period than are the takeoff (6), approach (3), and landing (5) phases of flight (Table 14 and Figure 8).

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<sup>7</sup> Manoeuvring (i.e., low altitude/aerobatic flight operations) does not occur on all flights.

Figure 7. Airplane accidents having events in selected phases of flight, 2013 to 2023.

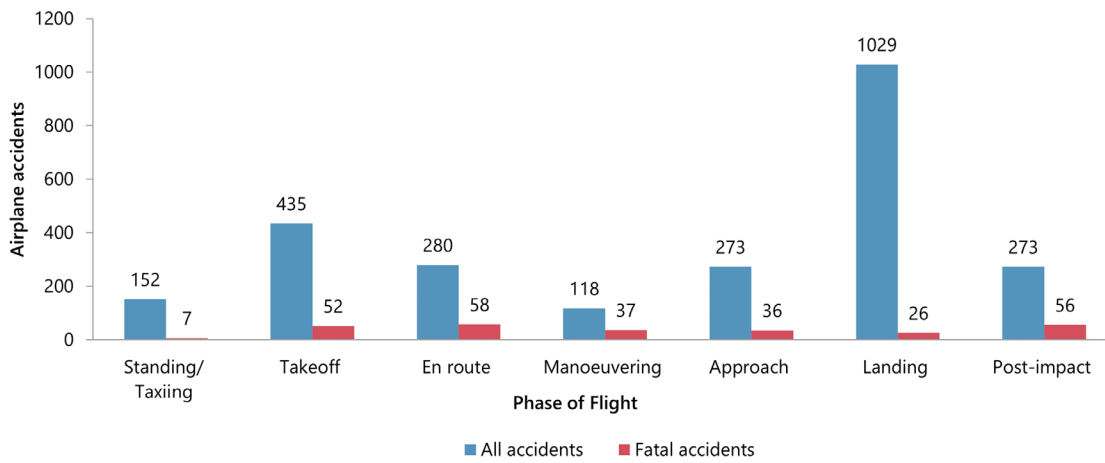
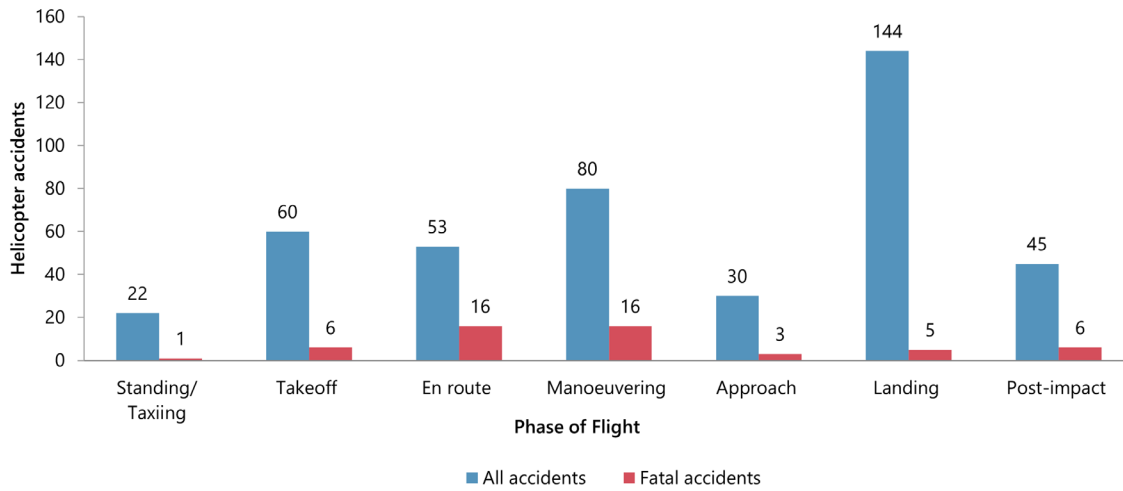


Figure 8. Helicopter accidents having events in selected phases of flight, 2013 to 2023.



# Overview of incidents

## Incident counts

In 2023, a total of 838 air transportation incidents were reported in accordance with the TSB Regulations (Table 9). This represents an increase of 15% from the 728 that were reported in 2022 and is 13% above the average of 742 incidents recorded per year between 2013 and 2022. Prior to 2020, incident counts had been generally increasing, which reflected both an increase in commercial flying activity and the introduction of new TSB reporting regulations that became effective 01 July 2014. Under these reporting requirements, air transportation incidents to be reported to the TSB were expanded to include aircraft with a maximum certificated takeoff weight greater than 2250 kg (formerly 5700 kg) and aircraft being operated with an air operator certificate issued under CARs Part VII—Commercial Air Services. At the onset of the COVID-19 pandemic in early 2020, both commercial flying activity and the number of reported incidents were greatly reduced.

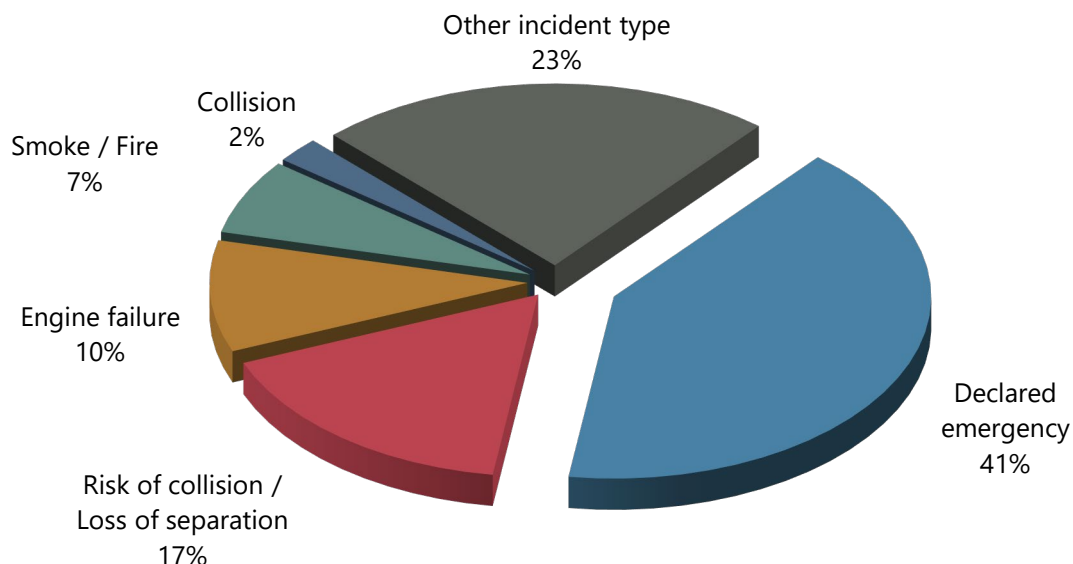
Overall, 2023 saw a continued return toward pre-pandemic levels of commercial air traffic in Canada,<sup>8</sup> accompanied by an increase in reported air transportation incidents to pre-pandemic numbers. While declared emergency (345 incidents) is still the most frequently reported incident category in 2023 (Table 9 and Figure 9), it should be noted that this is something of a catch-all category for incidents where an emergency is declared and no other primary category (as set out in the TSB Regulations) applies. Risk of collision / loss of separation (ROC/LOS) incidents (139) increased in frequency compared to 2022 and represented about 17% of all incidents in 2023. Incidents involving engine failure (83) rose in 2023 to about 10% of all incidents. Amongst the remaining incident types, crew—flight crew or cabin crew—were reported to have been unable to perform their duties 86 times, or in 10% of all reportable incidents in the year, up from a low of 16 incidents (3.2%) in 2021.

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<sup>8</sup> Statistics Canada. Table 23-10-0269-01 Transportation activity indicators, Transport Canada  
DOI: <https://doi.org/10.25318/2310026901-eng> (Last accessed 19 April 2024).



Figure 9. Reported air transportation incidents, by type, 2023.



The majority (68%) of reported air transportation incidents in 2023 occurred in Canada and involved Canadian-registered aircraft (Table 1). However, 208 incidents involving Canadian-registered aircraft occurred outside Canada. This is greater than the previous high of 173 from 2022, and greatly exceeds the average of 110 per year in the 10 years from 2013 to 2022. Declared emergency and risk of collision/loss of separation (ROC/LOS) were the two most common incident types involving Canadian-registered aircraft outside of Canada (Table 1). Both incident types have increased in frequency in recent years. The TSB continues to monitor these trends moving forward.

The overall increase in reportable incidents is at least partially linked to improvements in reporting culture in the airline industry, the adoption of safety management systems by many smaller commercial operators (in addition to all of the major Canadian airlines), and the increased use of electronic flight bags and portable devices, both of which make it easier for pilots to report incidents.

In part due to reporting requirements laid out in the TSB Regulations, commercial operations were the source of the vast majority (95%) of the incidents reported to the TSB in 2023 (Table 9). More than two thirds of these incidents (546 of 838) involved Canadian-registered airliners operating under CARs Subpart 705 (airline operations) (tables 9 and 10). This is down from a peak of 614 in 2017, but 24% greater than the average of 442 incidents per year from 2013 to 2022 that involved Canadian-registered airliners.

Foreign air operators (CARs 701) were involved in 63 incidents in 2023, or about 8% of all commercial incidents (Table 9). This is lower than the levels recorded before the pandemic, despite the return to almost pre-pandemic levels of transborder and international passenger traffic.<sup>9</sup>

<sup>9</sup> Statistics Canada. Table 23-10-0269-01 Transportation activity indicators, Transport Canada  
DOI: <https://doi.org/10.25318/2310026901-eng> (Last accessed 19 April 2024).

# Data tables

Table 1. Reportable air transportation occurrences, by type of occurrence, 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Accidents</b>	<b>276</b>	<b>249</b>	<b>251</b>	<b>230</b>	<b>240</b>	<b>201</b>	<b>228</b>	<b>171</b>	<b>192</b>	<b>166</b>	<b>182</b>
Accidents in Canada involving Canadian-registered aircraft	262	238	232	214	222	180	211	165	185	153	169
Accidents outside Canada involving Canadian-registered aircraft	4	4	10	8	11	11	8	6	6	7	7
Accidents in Canada involving foreign-registered aircraft	10	7	9	8	7	11	10	0	1	6	6
<b>Accidents<sup>1</sup></b>	<b>276</b>	<b>249</b>	<b>251</b>	<b>230</b>	<b>240</b>	<b>201</b>	<b>228</b>	<b>171</b>	<b>192</b>	<b>166</b>	<b>182</b>
Commercial	84	82	74	63	97	66	83	55	64	56	77
Airliner (CARs 705)	7	4	9	1	9	8	7	4	4	4	6
Commuter (CARs 704)	3	2	3	3	5	1	4	3	1	1	3
Air taxi (CARs 703)	33	34	23	26	28	23	26	13	18	12	25
Aerial work (CARs 702)	21	17	18	16	18	17	21	14	22	19	17
Foreign air operator (CARs 701)	2	0	0	0	4	3	1	0	0	1	0
Flight training units (CARs 406)	17	25	20	17	32	13	25	20	19	17	25
Other commercial	1	1	1	1	2	1	0	1	0	2	2
Private	179	159	172	164	142	134	144	114	127	108	103
Private operators (CARs 604)	4	3	0	5	0	3	1	2	0	0	5
Recreational	175	156	165	152	135	126	137	109	124	104	96
Other private	0	0	7	8	7	7	6	3	3	4	2
State	6	4	1	0	0	2	1	1	1	0	2
Other/Unknown	9	5	5	3	2	0	0	1	1	2	1
<b>Accidents<sup>1</sup></b>	<b>276</b>	<b>249</b>	<b>251</b>	<b>230</b>	<b>240</b>	<b>201</b>	<b>228</b>	<b>171</b>	<b>192</b>	<b>166</b>	<b>182</b>
Airplane	212	176	197	174	178	153	176	133	138	126	131
Helicopter	27	34	33	28	27	26	28	17	29	20	32
Ultralight	23	32	17	22	25	18	19	17	20	15	17
Other <sup>2</sup>	15	8	7	6	10	4	6	4	6	6	2
<b>Aircraft involved in accidents<sup>1,3</sup></b>	<b>280</b>	<b>253</b>	<b>259</b>	<b>234</b>	<b>247</b>	<b>207</b>	<b>231</b>	<b>173</b>	<b>196</b>	<b>167</b>	<b>186</b>
Airplane	215	179	202	178	184	159	178	135	141	126	135
Helicopters	27	34	33	28	27	26	28	17	29	20	32
Ultralights	23	32	17	22	25	18	19	17	20	15	17
Other <sup>2</sup>	15	8	7	6	11	4	6	4	6	6	2
<b>Fatal accidents<sup>1</sup></b>	<b>38</b>	<b>14</b>	<b>29</b>	<b>29</b>	<b>22</b>	<b>23</b>	<b>33</b>	<b>12</b>	<b>22</b>	<b>24</b>	<b>19</b>
Airplane	25	12	20	22	18	17	27	7	14	16	11
Helicopter	6	0	5	2	2	4	3	2	5	3	4
Ultralight	4	2	4	4	1	2	3	3	3	4	4
Other <sup>2</sup>	4	0	0	1	1	0	1	0	0	1	0
<b>Persons fatally injured in reportable accidents</b>	<b>65</b>	<b>21</b>	<b>47</b>	<b>45</b>	<b>34</b>	<b>38</b>	<b>70</b>	<b>16</b>	<b>31</b>	<b>34</b>	<b>33</b>
<b>Persons seriously injured in reportable accidents</b>	<b>22</b>	<b>35</b>	<b>31</b>	<b>18</b>	<b>33</b>	<b>28</b>	<b>31</b>	<b>18</b>	<b>44</b>	<b>36</b>	<b>22</b>
<b>Accidents in Canada involving foreign-registered aircraft</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>6</b>
Fatal accidents	2	2	3	1	0	0	4	0	0	2	0
Persons fatally injured	2	4	4	7	0	0	11	0	0	2	0
Persons seriously injured	0	1	0	0	0	4	1	0	0	2	2
<b>Occurrences with a dangerous good release</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>8</b>	<b>7</b>	<b>2</b>
<b>Incidents<sup>4</sup></b>	<b>689</b>	<b>741</b>	<b>789</b>	<b>833</b>	<b>939</b>	<b>860</b>	<b>915</b>	<b>421</b>	<b>500</b>	<b>728</b>	<b>838</b>
Incidents in Canada involving Canadian-registered aircraft	541	599	653	620	685	608	654	319	402	493	567
Incidents outside Canada involving Canadian-registered aircraft	38	55	58	117	181	161	181	66	72	173	208
Incidents in Canada involving foreign-registered aircraft	129	102	106	117	106	115	113	43	30	71	77
<b>Incidents<sup>4</sup></b>	<b>689</b>	<b>741</b>	<b>789</b>	<b>833</b>	<b>939</b>	<b>860</b>	<b>915</b>	<b>421</b>	<b>500</b>	<b>728</b>	<b>838</b>
Risk of collision / Loss of separation	115	94	111	139	172	141	138	49	62	124	139
Declared emergency	294	313	333	311	348	340	366	190	205	311	345
Engine failure	83	104	110	110	98	91	103	50	83	65	83
Smoke/Fire	67	89	87	85	100	99	91	25	44	53	56
Collision	15	16	8	18	24	26	31	8	7	18	19
Other	115	125	140	170	197	163	186	99	99	157	196

Data extracted 12 March 2024

<sup>1</sup> Breakdowns may not add up to totals. For example, when an occurrence involves an airplane and a helicopter, the occurrence is counted in each type, but only once in the total.

<sup>2</sup> Includes balloons, gyroplanes, gliders, airships, hang gliders, remotely piloted aircraft systems (RPAS), and similar aircraft types.

<sup>3</sup> "Aircraft involved in accidents" are aircraft counts, all other data are accident counts.

<sup>4</sup> Under the 2014 TSB Regulations, reportable aviation incidents include a) aircraft having a maximum certificated take-off weight greater than 2250 kg (formerly 5700 kg); b) aircraft being operated under an air operator certificate issued under the *Canadian Aviation Regulations*, Part VII.

**Table 2. Air transportation occurrences involving Canadian-registered aircraft, by aircraft and operator type, 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Accidents<sup>1,2</sup></b>	<b>243</b>	<b>212</b>	<b>227</b>	<b>200</b>	<b>208</b>	<b>173</b>	<b>200</b>	<b>154</b>	<b>171</b>	<b>146</b>	<b>159</b>
Airplane accidents	204	170	190	167	171	143	168	133	137	120	127
Commercial	58	55	51	42	71	46	66	45	44	39	50
Airliner (CARs 705)	7	4	9	1	9	8	7	4	4	4	6
Commuter (CARs 704)	3	1	3	3	5	1	4	3	1	1	2
Air taxi (CARs 703)	19	19	12	16	18	18	21	10	11	8	13
Aerial work (CARs 702)	12	8	10	7	12	6	11	8	9	10	6
Flight training units (CARs 406)	16	23	16	16	27	12	23	20	19	16	23
Other commercial	1	0	1	0	0	1	0	0	0	0	0
Private	139	111	138	122	101	96	101	88	93	80	76
Private operators (CARs 604)	3	1	0	5	0	3	1	2	0	0	5
Recreational	136	110	132	114	98	92	97	83	91	79	69
Other private	0	0	6	4	3	2	3	3	2	1	2
State	2	3	1	0	0	2	1	0	0	0	2
Other/Unknown	7	2	1	3	0	0	0	0	0	1	0
Helicopter accidents	27	34	32	27	27	26	27	17	29	20	30
Commercial	22	26	23	18	22	17	16	10	20	14	26
Private	4	7	9	9	5	9	11	6	9	6	4
State	1	1	0	0	0	0	0	1	0	0	0
Other/Unknown	0	0	0	0	0	0	0	0	0	0	0
Other aircraft accidents <sup>3</sup>	13	8	7	6	10	4	6	4	6	6	2
<b>Fatal accidents<sup>1,2</sup></b>	<b>32</b>	<b>10</b>	<b>23</b>	<b>24</b>	<b>21</b>	<b>21</b>	<b>26</b>	<b>9</b>	<b>19</b>	<b>18</b>	<b>15</b>
Airplane accidents	24	10	18	21	18	17	23	7	14	14	11
Commercial	8	2	6	3	7	4	8	1	2	5	4
Airliner (CARs 705)	0	0	0	0	1	0	0	0	0	0	0
Commuter (CARs 704)	1	0	0	0	0	0	0	0	0	0	0
Air taxi (CARs 703)	5	1	3	1	1	2	6	1	0	1	1
Aerial work (CARs 702)	1	1	2	1	2	2	1	0	2	3	1
Flight training units (CARs 406)	1	0	1	1	3	0	1	0	0	1	2
Other commercial	0	0	0	0	0	0	0	0	0	0	0
Private	14	8	13	18	11	13	15	6	12	9	7
Private operators (CARs 604)	1	0	0	1	0	1	0	0	0	0	0
Recreational	13	8	13	16	10	13	15	6	12	9	7
Other private	0	0	0	1	1	0	0	0	0	0	0
State	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	2	0	0	0	0	0	0	0	0	0	0
Helicopter accidents	6	0	5	2	2	4	3	2	5	3	4
Commercial	6	0	4	1	2	1	1	1	4	2	4
Private	0	0	1	1	0	3	2	1	1	1	0
State	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	0	0	0	0	0	0	0	0	0	0	0
Other aircraft accidents <sup>3</sup>	3	0	0	1	1	0	1	0	0	1	0
<b>Persons fatally injured<sup>2</sup></b>	<b>59</b>	<b>15</b>	<b>40</b>	<b>34</b>	<b>33</b>	<b>36</b>	<b>54</b>	<b>13</b>	<b>28</b>	<b>27</b>	<b>29</b>
<b>Persons seriously injured<sup>2</sup></b>	<b>19</b>	<b>28</b>	<b>28</b>	<b>17</b>	<b>27</b>	<b>21</b>	<b>26</b>	<b>14</b>	<b>36</b>	<b>30</b>	<b>15</b>
<b>Incidents<sup>2,4</sup></b>	<b>579</b>	<b>654</b>	<b>711</b>	<b>737</b>	<b>866</b>	<b>769</b>	<b>835</b>	<b>385</b>	<b>473</b>	<b>666</b>	<b>775</b>
Risk of collision / Loss of separation	105	84	101	127	159	134	128	48	61	122	137
Declared emergency	231	277	290	263	316	298	318	170	192	268	313
Engine failure	70	94	102	102	88	79	96	44	78	62	81
Smoke/Fire	55	76	79	75	95	85	83	21	41	48	48
Collision	14	15	7	16	23	21	27	8	7	18	18
Other	104	108	132	154	185	152	183	94	94	148	178
<b>Accidents involving ultralight aircraft</b>	<b>23</b>	<b>31</b>	<b>16</b>	<b>22</b>	<b>25</b>	<b>18</b>	<b>19</b>	<b>17</b>	<b>20</b>	<b>15</b>	<b>17</b>
Fatal accidents	4	2	3	4	1	2	3	3	3	4	4
Fatalities	4	2	3	4	1	2	5	3	3	5	4
Serious injuries	3	6	3	1	6	3	4	4	8	3	5

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Data extracted 12 March 2024

<sup>1</sup> Breakdowns may not add up to totals. For example, when an occurrence involves an airplane and a helicopter, the occurrence is counted in each type, but only once in the total.

<sup>2</sup> Excludes ultralight aircraft.

<sup>3</sup> Includes balloons, gyroplanes, gliders, airships, hang gliders, remotely piloted aircraft systems (RPAS), and similar aircraft types.

<sup>4</sup> Under the 2014 TSB Regulations, reportable aviation incidents include a) aircraft having a maximum certificated take-off weight greater than 2250 kg (formerly 5700 kg); b) aircraft being operated under an air operator certificate issued under the *Canadian Aviation Regulations*, Part VII.

**Table 3. Rate of accidents per 100 000 aircraft<sup>1</sup> movements, by airplanes and helicopters in Canada, 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Accidents	235	206	220	196	195	167	196	145	161	139	156
Fatal accidents	28	11	21	23	18	17	29	9	17	19	14
Fatalities	52	17	39	37	30	26	63	13	26	28	27
Aircraft movements <sup>2</sup> (thousands)	6 024	6 010	6 016	6 023	6 136	6 295	6 140	4 074	4 571	5 214	5 502
Accidents per 100 000 aircraft movements	3.9	3.4	3.7	3.3	3.2	2.7	3.2	3.6	3.5	2.7	2.8
Fatal accidents per 100 000 aircraft movements	0.5	0.2	0.3	0.4	0.3	0.3	0.5	0.2	0.4	0.4	0.3
Fatalities per 100 000 aircraft movements	0.9	0.3	0.6	0.6	0.5	0.4	1.0	0.3	0.6	0.5	0.5

Data extracted 12 March 2024

<sup>1</sup> Excluding ultralights, balloons, gyroplanes, gliders, airships, hang gliders and similar aircraft types.

<sup>2</sup> Statistics Canada. Table 23-10-0296-01 Aircraft movements, by class of operation, airports with NAV CANADA services and other selected airports, monthly. DOI: <https://doi.org/10.25318/2310029601-eng>; Table 23-10-0003-01 Aircraft movements, by civil and military movements, airports with NAV CANADA towers, monthly. DOI: <https://doi.org/10.25318/2310000301-eng>; Table 23-10-0010-01 Aircraft movements, by civil and military movements, airports with NAV CANADA flight service stations, monthly. DOI: <https://doi.org/10.25318/2310001001-eng>; Table 23-10-0016-01 Aircraft movements, by class of operation and type of operation, airports without air traffic control towers, monthly. DOI: <https://doi.org/10.25318/2310001601-eng>.

**Table 4. Persons fatally injured in air transportation accidents, by type of operation, 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Persons fatally injured</b>	<b>65</b>	<b>21</b>	<b>47</b>	<b>45</b>	<b>34</b>	<b>38</b>	<b>70</b>	<b>16</b>	<b>31</b>	<b>34</b>	<b>33</b>
In Canada, involving Canadian-registered aircraft	57	15	39	35	32	28	57	16	29	32	31
Outside Canada, involving Canadian-registered aircraft	6	2	4	3	2	10	2	0	2	0	2
In Canada, involving foreign-registered aircraft	2	4	4	7	0	0	11	0	0	2	0
<b>Persons fatally injured</b>	<b>65</b>	<b>21</b>	<b>47</b>	<b>45</b>	<b>34</b>	<b>38</b>	<b>70</b>	<b>16</b>	<b>31</b>	<b>34</b>	<b>33</b>
Commercial	29	4	20	6	15	9	25	2	8	10	13
Airliner (CARs 705)	0	0	0	0	1	0	0	0	0	0	0
Commuter (CARs 704)	5	0	0	0	0	0	0	0	0	0	0
Air taxi (CARs 703)	19	2	12	1	1	5	21	1	1	3	4
Aerial work (CARs 702)	4	2	6	2	7	4	3	1	7	6	4
Foreign air operator (CARs 701)	0	0	0	0	0	0	0	0	0	0	0
Flight training units (CARs 406)	1	0	2	3	5	0	1	0	0	1	5
Other commercial	0	0	0	0	1	0	0	0	0	0	0
Private	33	17	28	39	19	29	45	14	23	24	20
Private operators (CARs 604)	1	0	0	4	0	1	0	0	0	0	0
Recreational	32	17	28	27	17	29	43	14	23	24	20
Other private	0	0	0	8	2	0	2	0	0	0	0
State	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	3	0	1	0	0	0	0	0	0	0	0
<b>Crew members fatally injured</b>	<b>44</b>	<b>15</b>	<b>29</b>	<b>25</b>	<b>26</b>	<b>20</b>	<b>34</b>	<b>11</b>	<b>18</b>	<b>24</b>	<b>19</b>
Commercial	21	3	10	3	11	3	10	2	4	7	8
Airliner (CARs 705)	0	0	0	0	0	0	0	0	0	0	0
Commuter (CARs 704)	2	0	0	0	0	0	0	0	0	0	0
Air taxi (CARs 703)	14	1	4	1	1	0	8	1	0	1	2
Aerial work (CARs 702)	4	2	4	1	4	3	1	1	4	5	2
Foreign air operator (CARs 701)	0	0	0	0	0	0	0	0	0	0	0
Flight training units (CARs 406)	1	0	2	1	5	0	1	0	0	1	4
Other commercial	0	0	0	0	1	0	0	0	0	0	0
Private	21	12	20	22	15	17	24	9	14	17	11
Private operators (CARs 604)	1	0	0	1	0	1	0	0	0	0	0
Recreational	20	12	20	18	14	17	22	9	14	17	11
Other private	0	0	0	3	1	0	2	0	0	0	0
State	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	2	0	1	0	0	0	0	0	0	0	0
<b>Passengers fatally injured</b>	<b>20</b>	<b>6</b>	<b>18</b>	<b>20</b>	<b>8</b>	<b>18</b>	<b>36</b>	<b>5</b>	<b>11</b>	<b>10</b>	<b>12</b>
Commercial	8	1	10	3	4	6	15	0	3	3	3
Airliner (CARs 705)	0	0	0	0	1	0	0	0	0	0	0
Commuter (CARs 704)	3	0	0	0	0	0	0	0	0	0	0
Air taxi (CARs 703)	5	1	8	0	0	5	13	0	0	2	2
Aerial work (CARs 702)	0	0	2	1	3	1	2	0	3	1	0
Foreign air operator (CARs 701)	0	0	0	0	0	0	0	0	0	0	0
Flight training units (CARs 406)	0	0	0	2	0	0	0	0	0	0	1
Other commercial	0	0	0	0	0	0	0	0	0	0	0
Private	11	5	8	17	4	12	21	5	8	7	9
Private operators (CARs 604)	0	0	0	3	0	0	0	0	0	0	0
Recreational	11	5	8	9	3	12	21	5	8	7	9
Other private	0	0	0	5	1	0	0	0	0	0	0
State	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	1	0	0	0	0	0	0	0	0	0	0
<b>Persons on the ground fatally injured</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>
<b>Persons fatally injured</b>	<b>65</b>	<b>21</b>	<b>47</b>	<b>45</b>	<b>34</b>	<b>38</b>	<b>70</b>	<b>16</b>	<b>31</b>	<b>34</b>	<b>33</b>
Airplane	46	19	35	37	27	30	60	11	18	25	24
Helicopter	12	0	8	3	5	6	5	2	10	3	5
Ultralight	4	2	4	4	1	2	5	3	3	5	4
Other aircraft type	7	0	0	1	1	0	2	0	0	1	0

Data extracted 12 March 2024

**Table 5. Persons seriously injured in air transportation accidents, by type of operation, 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Persons seriously injured</b>	<b>22</b>	<b>35</b>	<b>31</b>	<b>18</b>	<b>33</b>	<b>28</b>	<b>31</b>	<b>18</b>	<b>44</b>	<b>35</b>	<b>22</b>
In Canada, involving Canadian-registered aircraft	22	34	28	17	31	23	27	15	42	30	20
Outside Canada, involving Canadian-registered Aircraft	0	0	3	1	2	1	3	3	2	3	0
In Canada, involving foreign-registered aircraft	0	1	0	0	0	4	1	0	0	2	2
<b>Persons seriously injured</b>	<b>22</b>	<b>35</b>	<b>31</b>	<b>18</b>	<b>33</b>	<b>28</b>	<b>31</b>	<b>18</b>	<b>44</b>	<b>35</b>	<b>22</b>
Commercial	11	10	15	8	13	17	13	4	13	11	7
Airliner (CARs 705)	0	0	3	2	8	4	1	1	3	3	0
Commuter (CARs 704)	2	0	0	0	0	0	0	1	0	0	1
Air taxi (CARs 703)	6	5	8	4	0	9	8	0	1	4	3
Aerial work (CARs 702)	3	3	3	2	2	2	2	1	8	4	2
Foreign air operator (CARs 701)	0	0	0	0	0	1	0	0	0	0	0
Flight training units (CARs 406)	0	2	1	0	2	1	2	1	1	0	1
Other commercial	0	0	0	0	1	0	0	0	0	0	0
Private	10	23	16	10	20	11	18	13	31	24	13
Private operators (CARs 604)	0	0	0	0	0	0	0	0	0	0	0
Recreational	10	23	14	9	19	8	18	13	31	24	13
Other private	0	0	2	1	1	3	0	0	0	0	0
State	0	0	0	0	0	0	0	1	0	0	1
Other/Unknown	1	2	0	0	0	0	0	0	0	0	1
<b>Crew members seriously injured</b>	<b>13</b>	<b>23</b>	<b>17</b>	<b>8</b>	<b>22</b>	<b>19</b>	<b>16</b>	<b>13</b>	<b>31</b>	<b>21</b>	<b>14</b>
Commercial	4	5	6	3	8	10	2	3	12	5	3
Airliner (CARs 705)	0	0	1	0	3	3	0	1	3	2	0
Commuter (CARs 704)	0	0	0	0	0	0	0	0	0	0	0
Air taxi (CARs 703)	2	2	2	2	0	3	0	0	0	2	1
Aerial work (CARs 702)	2	1	3	1	2	2	1	1	8	1	1
Foreign air operator (CARs 701)	0	0	0	0	0	1	0	0	0	0	0
Flight training units (CARs 406)	0	2	0	0	2	1	1	1	1	0	1
Other commercial	0	0	0	0	1	0	0	0	0	0	0
Private	8	17	11	5	14	9	14	9	19	16	10
Private operators (CARs 604)	0	0	0	0	0	0	0	0	0	0	0
Recreational	8	17	9	5	14	7	14	9	19	16	10
Other private	0	0	2	0	0	2	0	0	0	0	0
State	0	0	0	0	0	0	0	1	0	0	1
Other/Unknown	1	1	0	0	0	0	0	0	0	0	0
<b>Passengers seriously injured</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>8</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>4</b>	<b>13</b>	<b>13</b>	<b>7</b>
Commercial	6	5	9	4	5	7	9	1	1	6	3
Airliner (CARs 705)	0	0	2	2	5	1	0	0	0	1	0
Commuter (CARs 704)	2	0	0	0	0	0	0	1	0	0	1
Air taxi (CARs 703)	4	3	6	2	0	6	7	0	1	2	2
Aerial work (CARs 702)	0	2	0	0	0	0	1	0	0	3	0
Foreign air operator (CARs 701)	0	0	0	0	0	0	0	0	0	0	0
Flight training units (CARs 406)	0	0	1	0	0	0	1	0	0	0	0
Other commercial	0	0	0	0	0	0	0	0	0	0	0
Private	2	5	5	4	6	2	4	3	12	7	3
Private operators (CARs 604)	0	0	0	0	0	0	0	0	0	0	0
Recreational	2	5	5	4	5	1	4	3	12	7	3
Other private	0	0	0	0	1	1	0	0	0	0	0
State	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	0	1	0	0	0	0	0	0	0	0	1
<b>Persons on the ground seriously injured</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>
<b>Persons seriously injured</b>	<b>22</b>	<b>35</b>	<b>31</b>	<b>18</b>	<b>33</b>	<b>28</b>	<b>31</b>	<b>18</b>	<b>44</b>	<b>35</b>	<b>22</b>
Airplane	13	21	23	10	23	23	26	10	25	25	14
Helicopter	6	6	5	6	3	2	1	3	8	6	3
Ultralight	3	7	3	1	6	3	4	4	8	3	5
Other aircraft type	0	1	0	1	1	0	0	1	3	1	0

Data extracted 12 March 2024



**Table 6. Accidents involving Canadian-registered airplanes and helicopters, by type of operation,<sup>1,2</sup> 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Airplane accidents</b>	<b>204</b>	<b>170</b>	<b>190</b>	<b>167</b>	<b>171</b>	<b>143</b>	<b>168</b>	<b>133</b>	<b>137</b>	<b>120</b>	<b>127</b>
Training	24	27	16	20	31	14	28	23	19	22	31
Pleasure/Travel	127	96	125	112	92	83	83	74	85	66	59
Business	2	9	1	3	1	7	5	4	3	2	3
Forest fire management	3	2	2	1	0	1	2	1	4	2	2
Test/Demonstration/Ferry	4	5	2	2	4	1	3	2	3	1	4
Aerial application	7	4	5	6	6	5	6	8	1	6	2
Inspection	1	0	1	0	1	0	0	0	0	2	0
Air transport	26	22	22	16	27	26	29	15	14	14	19
Air ambulance	0	1	0	3	1	1	1	1	2	0	3
Sightseeing	1	1	1	0	1	1	2	0	1	0	0
Other/Unknown	11	4	16	5	8	6	9	5	5	5	5
<b>Fatal airplane accidents</b>	<b>24</b>	<b>10</b>	<b>18</b>	<b>21</b>	<b>18</b>	<b>17</b>	<b>23</b>	<b>7</b>	<b>14</b>	<b>14</b>	<b>11</b>
Training	2	1	1	1	3	0	1	1	1	2	3
Pleasure/Travel	11	7	12	15	9	12	12	5	10	7	6
Business	1	1	0	1	0	1	1	0	0	0	0
Forest fire management	0	0	1	0	0	0	0	0	1	0	0
Test/Demonstration/Ferry	1	0	0	1	0	0	1	0	0	0	0
Aerial application	1	0	0	2	1	1	0	0	0	2	0
Inspection	0	0	0	0	0	0	0	0	0	1	0
Air transport	5	1	2	1	2	2	6	1	0	1	1
Air ambulance	0	0	0	0	0	0	0	0	0	0	0
Sightseeing	0	0	1	0	0	0	0	0	0	0	0
Other/Unknown	3	0	2	0	3	2	2	0	2	1	1
<b>Helicopter accidents</b>	<b>27</b>	<b>34</b>	<b>32</b>	<b>27</b>	<b>27</b>	<b>26</b>	<b>27</b>	<b>17</b>	<b>29</b>	<b>20</b>	<b>30</b>
Training	1	2	5	1	7	1	2	0	1	2	3
Pleasure/Travel	2	7	8	9	4	6	9	6	6	3	4
Business	1	0	1	0	0	2	1	0	1	1	0
Forest fire management	3	0	2	0	2	2	1	1	3	1	3
Test/Demonstration/Ferry	1	0	0	0	0	1	0	0	2	1	0
Aerial application	0	1	2	1	3	1	3	2	1	4	1
Inspection	2	3	0	1	0	1	0	0	0	0	0
Air transport	8	18	9	7	3	3	9	2	6	3	14
Air ambulance	2	0	1	0	1	0	0	0	0	0	0
Sightseeing	0	1	0	0	1	1	0	0	0	0	0
Other/Unknown	7	2	4	8	6	8	2	6	9	5	5
<b>Fatal helicopter accidents</b>	<b>6</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>4</b>
Training	0	0	0	0	1	0	0	0	0	0	0
Pleasure/Travel	0	0	0	1	0	2	2	1	1	1	0
Business	0	0	1	0	0	0	0	0	0	0	0
Forest fire management	0	0	0	0	0	0	0	0	1	0	0
Test/Demonstration/Ferry	0	0	0	0	0	1	0	0	0	0	0
Aerial application	0	0	1	0	0	0	0	0	0	0	0
Inspection	1	0	0	0	0	0	0	0	0	0	0
Air transport	3	0	3	0	0	0	1	0	1	0	2
Air ambulance	1	0	0	0	0	0	0	0	0	0	0
Sightseeing	0	0	0	0	0	0	0	0	0	0	0
Other/Unknown	1	0	0	1	1	1	0	1	2	2	2

Data extracted 12 March 2024

<sup>1</sup> Canadian-registered aircraft, excluding ultralights, balloons, gyroplanes, gliders, airships, hang gliders and similar aircraft types.

<sup>2</sup> Breakdowns may not add up to totals. For example, when an occurrence involves a business airplane and a training airplane, the occurrence is counted in each type, but only once in the total.

**Table 7. Fatal air transportation accidents and fatalities in Canada and outside Canada, 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Accidents</b>	<b>276</b>	<b>249</b>	<b>251</b>	<b>230</b>	<b>240</b>	<b>201</b>	<b>228</b>	<b>171</b>	<b>192</b>	<b>166</b>	<b>182</b>
Newfoundland and Labrador	3	5	6	5	4	4	3	2	4	4	1
Prince Edward Island	0	0	0	0	2	0	0	0	0	1	0
Nova Scotia	5	3	6	2	3	2	1	1	2	0	3
New Brunswick	2	6	2	5	7	1	8	2	2	0	2
Quebec	66	69	51	34	44	31	50	33	45	33	32
Ontario	72	67	74	50	62	53	53	39	36	49	44
Manitoba	13	12	14	17	10	7	17	9	6	9	10
Saskatchewan	19	12	13	10	13	13	12	17	8	14	7
Alberta	29	33	23	38	35	32	29	25	29	18	22
British Columbia	51	30	42	53	39	36	39	34	46	28	44
Yukon	4	4	6	2	4	4	3	0	3	2	2
Northwest Territories	3	3	2	3	2	5	4	1	2	1	5
Nunavut	4	1	2	3	3	1	1	2	3	0	3
Other airspace under Canadian air traffic control	1	0	0	0	1	1	0	0	0	0	0
Outside Canada	4	4	10	8	11	11	8	6	6	7	7
<b>Fatal accidents</b>	<b>38</b>	<b>14</b>	<b>29</b>	<b>29</b>	<b>22</b>	<b>23</b>	<b>33</b>	<b>12</b>	<b>22</b>	<b>24</b>	<b>19</b>
Newfoundland and Labrador	0	0	1	0	0	0	2	1	1	1	0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	1	1	1	0	0	0	0	0	0	0	0
New Brunswick	0	1	0	1	0	0	1	0	0	0	0
Quebec	5	2	7	7	4	2	9	4	6	5	4
Ontario	9	5	6	5	4	6	6	1	5	10	3
Manitoba	2	0	1	1	3	0	1	0	0	1	0
Saskatchewan	2	1	2	2	2	1	0	0	0	1	0
Alberta	4	1	3	4	3	5	5	3	4	3	4
British Columbia	10	2	4	8	3	4	5	3	2	3	7
Yukon	0	0	0	0	1	0	2	0	0	0	0
Northwest Territories	1	0	0	0	0	1	1	0	0	0	0
Nunavut	0	0	0	0	0	0	0	0	2	0	0
Other airspace under Canadian air traffic control	1	0	0	0	0	0	0	0	0	0	0
Outside Canada	3	1	4	1	2	4	1	0	2	0	1
<b>Persons fatally injured</b>	<b>65</b>	<b>21</b>	<b>47</b>	<b>45</b>	<b>34</b>	<b>38</b>	<b>70</b>	<b>16</b>	<b>31</b>	<b>34</b>	<b>33</b>
Newfoundland and Labrador	0	0	1	0	0	0	8	1	2	1	0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	1	1	1	0	0	0	0	0	0	0	0
New Brunswick	0	2	0	2	0	0	1	0	0	0	0
Quebec	5	2	16	15	6	4	14	5	7	6	5
Ontario	19	8	10	5	9	8	16	1	6	15	4
Manitoba	5	0	1	2	4	0	3	0	0	1	0
Saskatchewan	3	2	3	2	3	1	0	0	0	2	0
Alberta	5	1	4	4	5	6	8	6	7	4	10
British Columbia	17	3	7	12	4	6	12	3	3	5	12
Yukon	0	0	0	0	1	0	4	0	0	0	0
Northwest Territories	1	0	0	0	0	3	2	0	0	0	0
Nunavut	0	0	0	0	0	0	0	0	4	0	0
Other airspace under Canadian air traffic control	3	0	0	0	0	0	0	0	0	0	0
Outside Canada	6	2	4	3	2	10	2	0	2	0	2

Data extracted 12 March 2024

**Table 8. Accidents and fatal accidents in Canada and outside Canada involving Canadian-registered aircraft,<sup>1</sup> 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Accidents</b>	<b>243</b>	<b>212</b>	<b>227</b>	<b>200</b>	<b>208</b>	<b>173</b>	<b>200</b>	<b>154</b>	<b>171</b>	<b>146</b>	<b>159</b>
Newfoundland and Labrador	3	4	6	4	3	2	2	2	3	1	1
Prince Edward Island	0	0	0	0	1	0	0	0	0	1	0
Nova Scotia	5	2	5	2	2	1	1	1	2	0	2
New Brunswick	2	6	2	5	5	1	8	2	2	0	2
Quebec	57	57	44	28	39	28	41	29	40	30	23
Ontario	59	53	66	43	51	44	46	32	28	40	41
Manitoba	13	11	13	17	10	7	12	9	6	8	9
Saskatchewan	18	10	12	10	12	13	12	16	8	14	7
Alberta	27	31	21	36	30	27	27	23	27	16	20
British Columbia	44	27	39	43	35	30	36	32	42	27	38
Yukon	4	4	6	1	4	2	2	0	2	1	2
Northwest Territories	3	2	2	3	2	5	4	1	2	1	5
Nunavut	3	1	1	2	3	1	1	2	3	0	2
Other airspace under Canadian air traffic control	1	0	0	0	0	1	0	0	0	0	0
Outside Canada	4	4	10	6	11	11	8	5	6	7	7
<b>Fatal accidents</b>	<b>32</b>	<b>10</b>	<b>23</b>	<b>24</b>	<b>21</b>	<b>21</b>	<b>26</b>	<b>9</b>	<b>19</b>	<b>18</b>	<b>15</b>
Newfoundland and Labrador	0	0	1	0	0	0	1	1	1	0	0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	1	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	1	0	1	0	0	1	0	0	0	0
Quebec	3	1	6	5	4	2	5	3	5	3	1
Ontario	6	3	5	3	4	5	5	0	3	8	3
Manitoba	2	0	0	1	3	0	1	0	0	1	0
Saskatchewan	2	1	2	2	2	1	0	0	0	1	0
Alberta	4	1	3	4	3	4	5	2	4	2	4
British Columbia	9	2	2	7	2	4	5	3	2	3	6
Yukon	0	0	0	0	1	0	1	0	0	0	0
Northwest Territories	1	0	0	0	0	1	1	0	0	0	0
Nunavut	0	0	0	0	0	0	0	0	2	0	0
Other airspace under Canadian air traffic control	1	0	0	0	0	0	0	0	0	0	0
Outside Canada	3	1	4	1	2	4	1	0	2	0	1
<b>Persons fatally injured</b>	<b>59</b>	<b>15</b>	<b>40</b>	<b>34</b>	<b>33</b>	<b>36</b>	<b>54</b>	<b>13</b>	<b>28</b>	<b>27</b>	<b>29</b>
Newfoundland and Labrador	0	0	1	0	0	0	7	1	2	0	0
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	1	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	2	0	2	0	0	1	0	0	0	0
Quebec	3	1	15	7	6	4	8	4	6	4	2
Ontario	16	4	9	3	9	7	9	0	4	13	4
Manitoba	5	0	0	2	4	0	3	0	0	1	0
Saskatchewan	3	2	3	2	3	1	0	0	0	2	0
Alberta	5	1	4	4	5	5	8	5	7	2	10
British Columbia	16	3	4	11	3	6	12	3	3	5	11
Yukon	0	0	0	0	1	0	2	0	0	0	0
Northwest Territories	1	0	0	0	0	3	2	0	0	0	0
Nunavut	0	0	0	0	0	0	0	0	4	0	0
Other airspace under Canadian air traffic control	3	0	0	0	0	0	0	0	0	0	0
Outside Canada	6	2	4	3	2	10	2	0	2	0	2

Data extracted 12 March 2024

<sup>1</sup> Canadian-registered aircraft, excluding ultralights, balloons, gyroplanes, gliders, airships, hang gliders and similar aircraft types.

**Table 9. Reportable aircraft incidents, by type of operation,<sup>1</sup> 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Incidents<sup>1</sup></b>	<b>689</b>	<b>741</b>	<b>789</b>	<b>833</b>	<b>939</b>	<b>860</b>	<b>915</b>	<b>421</b>	<b>500</b>	<b>728</b>	<b>838</b>
Risk of collision / Loss of separation	115	94	111	139	172	141	138	49	62	124	139
Declared emergency	294	313	333	311	348	340	366	190	205	311	345
Engine failure	83	104	110	110	98	91	103	50	83	65	83
Smoke/Fire	67	89	87	85	100	99	91	25	44	53	56
Collision	15	16	8	18	24	26	31	8	7	18	19
Control difficulties	25	40	29	35	34	41	25	25	24	41	38
Crew unable to perform duties	58	37	46	66	78	57	87	34	16	47	86
Dangerous goods-related	3	4	0	2	0	2	0	0	3	0	0
Depressurization	14	12	16	14	21	13	23	5	16	14	16
Fuel shortage	2	6	17	15	17	10	5	3	3	5	13
Failure to remain in landing area	9	20	17	19	22	11	9	10	10	17	11
Incorrect fuel	0	0	0	1	3	0	3	4	3	1	1
Slung load released	4	5	14	15	21	23	28	11	17	22	21
Transmission or gearbox failure	0	1	1	3	1	0	1	0	0	0	1
<b>Incidents<sup>1,2</sup></b>	<b>689</b>	<b>741</b>	<b>789</b>	<b>833</b>	<b>939</b>	<b>860</b>	<b>915</b>	<b>421</b>	<b>500</b>	<b>728</b>	<b>838</b>
Commercial	656	699	741	785	888	815	869	393	461	674	792
Airliner (CARs 705)	450	429	437	490	614	547	572	220	246	416	546
Commuter (CARs 704)	95	106	87	79	73	60	67	50	51	56	50
Air taxi (CARs 703)	30	79	114	104	102	90	104	59	83	95	83
Aerial work (CARs 702)	12	34	48	43	55	55	59	35	56	56	64
Foreign air operator (CARs 701)	113	82	75	94	80	91	86	32	27	55	63
Flight training units (CARs 406)	4	5	6	12	11	7	13	7	8	7	7
Other commercial	1	0	2	5	1	2	4	2	2	5	3
Private	31	37	52	45	56	51	56	27	38	51	51
Private operators (CARs 604)	18	22	19	19	32	19	25	12	18	27	25
Recreational	13	14	15	14	11	9	10	6	15	14	15
Other private	0	1	18	12	13	23	22	10	6	10	12
State	20	13	15	8	15	11	8	5	7	9	8
Other/Unknown	4	12	15	22	13	12	12	2	3	6	3
<b>Incidents<sup>1,2</sup></b>	<b>689</b>	<b>741</b>	<b>789</b>	<b>833</b>	<b>939</b>	<b>860</b>	<b>915</b>	<b>421</b>	<b>500</b>	<b>728</b>	<b>838</b>
Airplane	673	715	749	795	892	819	842	400	458	687	797
Helicopter	20	30	47	38	52	43	77	21	41	41	45
Ultralight/Other aircraft type <sup>3</sup>	0	3	8	7	4	4	6	0	1	2	2
<b>Aircraft involved in incidents<sup>1,4</sup></b>	<b>800</b>	<b>830</b>	<b>887</b>	<b>957</b>	<b>1063</b>	<b>970</b>	<b>1016</b>	<b>452</b>	<b>533</b>	<b>776</b>	<b>898</b>
Airplanes	780	797	832	912	1006	921	931	431	491	733	850
Helicopters	20	30	47	38	53	45	79	21	41	41	46
Ultralight / Other aircraft type <sup>3</sup>	0	3	8	7	4	4	6	0	1	2	2
<b>Incidents<sup>1</sup></b>	<b>689</b>	<b>741</b>	<b>789</b>	<b>833</b>	<b>939</b>	<b>860</b>	<b>915</b>	<b>421</b>	<b>500</b>	<b>728</b>	<b>838</b>
Newfoundland and Labrador	29	22	30	31	27	35	29	11	16	23	29
Prince Edward Island	2	0	1	4	1	2	1	1	1	3	0
Nova Scotia	11	22	19	17	22	28	28	13	6	11	24
New Brunswick	7	8	9	9	4	7	11	3	6	6	7
Quebec	122	89	116	109	139	141	147	75	76	108	120
Ontario	166	157	152	166	230	144	166	89	115	134	139
Manitoba	31	51	54	47	49	43	44	26	42	34	29
Saskatchewan	27	32	21	25	19	16	24	15	19	20	26
Alberta	103	98	117	110	107	104	106	43	40	62	91
British Columbia	99	132	154	137	101	123	129	56	75	89	104
Yukon	5	6	6	5	5	2	8	1	6	2	8
Northwest Territories	16	25	17	9	20	22	9	11	12	16	20
Nunavut	10	20	15	15	15	19	15	4	11	21	15
Other airspace under Canadian air traffic control	23	24	20	32	19	14	17	7	3	25	18
Outside Canada	38	55	58	117	181	161	181	66	72	173	208

Data extracted 12 March 2024

<sup>1</sup> Under the 2014 TSB Regulations, reportable aviation incidents include a) aircraft having a maximum certificated take-off weight greater than 2250 kg (formerly 5700 kg); b) aircraft being operated under an air operator certificate issued under the *Canadian Aviation Regulations*, Part VII.

<sup>2</sup> Breakdowns may not add up to totals. For example, when an occurrence involves an airplane and a helicopter, the occurrence is counted in each type, but only once in the total.

<sup>3</sup> Includes balloons, gyroplanes, gliders, airships, hang gliders, remotely piloted aircraft systems (RPAS), and similar aircraft types.

<sup>4</sup> "Aircraft involved in accidents" are aircraft counts; all other data are accident counts.

**Table 10. Reportable incidents<sup>1</sup> in Canada and outside Canada involving Canadian-registered aircraft, 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Incidents<sup>1</sup></b>	<b>579</b>	<b>654</b>	<b>711</b>	<b>737</b>	<b>866</b>	<b>769</b>	<b>835</b>	<b>385</b>	<b>473</b>	<b>666</b>	<b>775</b>
Risk of collision / Loss of separation	105	84	101	127	159	134	128	48	61	122	137
Declared emergency	231	277	290	263	316	298	318	170	192	268	313
Engine failure	70	94	102	102	88	79	96	44	78	62	81
Smoke/Fire	55	76	79	75	95	85	83	21	41	48	48
Collision	14	15	7	16	23	21	27	8	7	18	18
Control difficulties	22	36	28	30	33	40	25	24	24	38	34
Crew unable to perform duties	56	35	44	65	74	55	86	30	15	46	81
Dangerous goods-related	3	3	0	2	0	2	0	0	2	0	0
Depressurization	10	10	14	13	19	11	23	5	15	11	15
Fuel shortage	2	3	15	11	16	5	4	3	3	5	8
Failure to remain in landing area	7	17	17	14	18	10	8	10	10	16	10
Incorrect fuel	0	0	0	1	3	0	3	4	3	1	1
Slung load released	4	4	13	15	21	23	28	11	17	22	21
Transmission or gearbox failure	0	0	1	3	1	0	1	0	0	0	1
<b>Incidents by operator type<sup>1,2</sup></b>	<b>579</b>	<b>654</b>	<b>711</b>	<b>737</b>	<b>866</b>	<b>769</b>	<b>835</b>	<b>385</b>	<b>473</b>	<b>666</b>	<b>775</b>
Commercial	552	622	674	705	825	741	799	363	437	623	734
Airliner (CARs 705)	449	427	436	489	613	546	571	218	246	415	545
Commuter (CARs 704)	95	106	87	79	73	60	67	50	51	56	50
Air taxi (CARs 703)	30	79	114	104	102	90	104	58	83	95	83
Aerial work (CARs 702)	12	31	47	43	55	55	59	35	56	56	64
Flight training units (CARs 406)	4	5	6	12	11	7	13	7	8	7	7
Other commercial	0	0	1	2	0	1	3	1	2	5	3
Private	25	29	40	37	48	33	45	22	35	45	47
Private operators (CARs 604)	13	17	16	19	32	19	24	12	18	27	25
Recreational	12	11	14	12	11	8	10	6	14	14	15
Other private	0	1	10	6	5	6	12	5	4	4	8
State	19	11	15	6	13	10	8	5	7	8	8
Other/Unknown	4	9	14	14	10	12	10	1	3	1	2
<b>Incidents<sup>1,2</sup></b>	<b>579</b>	<b>654</b>	<b>711</b>	<b>737</b>	<b>866</b>	<b>769</b>	<b>835</b>	<b>385</b>	<b>473</b>	<b>666</b>	<b>775</b>
Airplane	563	631	672	699	819	728	762	364	432	626	735
Helicopter	20	27	46	38	52	43	77	21	41	41	44
Ultralight / Other aircraft type <sup>3</sup>	0	3	8	6	4	4	6	0	0	1	2
<b>Aircraft involved in incidents<sup>1,4</sup></b>	<b>681</b>	<b>730</b>	<b>800</b>	<b>843</b>	<b>981</b>	<b>874</b>	<b>927</b>	<b>415</b>	<b>505</b>	<b>712</b>	<b>833</b>
Airplanes	661	700	746	799	924	825	842	394	464	670	786
Helicopters	20	27	46	38	53	45	79	21	41	41	45
Ultralight / Other aircraft type <sup>3</sup>	0	3	8	6	4	4	6	0	0	1	2
<b>Incidents by province/territory<sup>1</sup></b>	<b>579</b>	<b>654</b>	<b>711</b>	<b>737</b>	<b>866</b>	<b>769</b>	<b>835</b>	<b>385</b>	<b>473</b>	<b>666</b>	<b>775</b>
Newfoundland and Labrador	17	13	20	22	22	22	15	8	14	21	22
Prince Edward Island	1	0	1	4	1	2	1	1	1	3	0
Nova Scotia	9	19	17	12	17	20	26	11	5	8	17
New Brunswick	4	6	9	9	3	6	8	2	6	6	7
Quebec	96	81	103	99	127	122	125	68	73	103	104
Ontario	142	139	141	148	202	129	146	85	109	118	124
Manitoba	27	45	51	44	47	38	44	25	40	32	29
Saskatchewan	26	27	19	25	18	14	24	13	19	19	24
Alberta	93	93	110	103	102	97	100	38	35	55	88
British Columbia	93	125	137	118	100	114	124	52	71	83	98
Yukon	3	5	6	5	3	2	8	1	5	1	7
Northwest Territories	16	25	17	8	20	21	8	10	12	16	19
Nunavut	10	16	14	15	14	16	14	3	10	19	15
Other airspace under Canadian air traffic control	4	5	8	8	9	5	11	2	1	9	13
Outside Canada	38	55	58	117	181	161	181	66	72	173	208

Data extracted 12 March 2024

<sup>1</sup> Under the 2014 TSB Regulations, reportable aviation incidents include a) aircraft having a maximum certificated take-off weight greater than 2250 kg (formerly 5700 kg); b) aircraft being operated under an air operator certificate issued under the *Canadian Aviation Regulations*, Part VII.

<sup>2</sup> Breakdowns may not add up to totals. For example, when an occurrence involves an airplane and a helicopter, the occurrence is counted in each type, but only once in the total.

<sup>3</sup> Includes balloons, gyroplanes, gliders, airships, hang gliders, remotely piloted aircraft systems (RPAS), and similar aircraft types.

<sup>4</sup> "Aircraft involved in accidents" are aircraft counts; all other data are accident counts.

**Table 11. Airplane accidents by phase of flight and selected event category,<sup>1</sup> 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
<b>Standing/Taxiing</b>	<b>23</b>	<b>16</b>	<b>19</b>	<b>16</b>	<b>20</b>	<b>13</b>	<b>14</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>152</b>
Collision with object	8	6	3	5	9	6	5	1	5	6	6	60
Collision with moving aircraft	1	3	5	4	3	3	2	1	3	0	2	27
Nose down/Overtuned	5	1	3	2	2	0	1	0	0	6	1	21
Landing gear collapse/retracted	2	1	2	1	3	1	2	0	0	0	1	13
Loss of control	4	1	0	0	0	0	0	0	0	0	0	5
Other events	11	9	12	13	14	10	10	3	4	7	6	99
<b>Takeoff</b>	<b>40</b>	<b>48</b>	<b>53</b>	<b>47</b>	<b>45</b>	<b>35</b>	<b>48</b>	<b>30</b>	<b>40</b>	<b>24</b>	<b>25</b>	<b>435</b>
Collision with terrain	11	10	18	13	15	7	14	4	12	4	6	114
Loss of control	7	18	9	11	7	5	11	3	11	1	2	85
Collision with object	8	11	18	12	8	11	17	12	10	7	4	118
Takeoff/landing event	9	11	11	14	16	11	11	8	13	7	1	112
Power loss	13	16	12	10	11	5	12	6	2	4	6	97
Other events	26	34	50	30	35	31	38	28	36	22	19	349
<b>En route</b>	<b>34</b>	<b>23</b>	<b>29</b>	<b>19</b>	<b>34</b>	<b>27</b>	<b>28</b>	<b>24</b>	<b>20</b>	<b>20</b>	<b>22</b>	<b>280</b>
Power loss	15	14	8	12	15	11	12	8	5	8	10	118
Precautionary/forced landing / Ditching	8	7	5	4	5	6	8	4	6	3	4	60
Collision with terrain	10	5	4	5	5	5	6	3	3	5	4	55
Component/system related	3	2	3	0	3	1	2	3	1	1	1	20
Other events	18	14	26	8	24	22	21	19	15	14	19	200
<b>Manoeuvring</b>	<b>12</b>	<b>4</b>	<b>11</b>	<b>13</b>	<b>11</b>	<b>12</b>	<b>15</b>	<b>14</b>	<b>4</b>	<b>12</b>	<b>10</b>	<b>118</b>
Collision with terrain	7	1	7	6	7	4	5	6	1	8	4	56
Loss of control	1	1	2	4	5	4	0	3	1	3	3	27
Collision with object	2	1	2	3	1	2	5	3	0	4	2	25
Power loss	0	0	1	2	1	1	1	2	1	3	1	13
Other events	5	3	4	6	2	8	12	7	3	9	7	66
<b>Approach</b>	<b>32</b>	<b>28</b>	<b>25</b>	<b>17</b>	<b>21</b>	<b>25</b>	<b>27</b>	<b>24</b>	<b>20</b>	<b>26</b>	<b>28</b>	<b>273</b>
Collision with terrain	6	7	10	4	7	5	8	1	3	13	10	74
Power loss	11	6	2	3	6	6	5	6	3	6	5	59
Collision with object	7	9	7	6	7	3	2	5	0	7	4	57
Component/system related	3	4	2	0	2	3	3	2	1	0	1	21
Precautionary/forced landing / Ditching	7	7	1	1	4	5	7	4	2	2	2	42
Loss of control	5	1	4	1	0	1	5	0	2	6	2	27
Other events	10	9	18	12	13	18	21	18	16	14	19	168
<b>Landing</b>	<b>116</b>	<b>99</b>	<b>118</b>	<b>113</b>	<b>95</b>	<b>92</b>	<b>93</b>	<b>80</b>	<b>84</b>	<b>58</b>	<b>81</b>	<b>1029</b>
Missed or went off runway	28	14	30	30	21	17	23	20	18	16	23	240
Collision with object	18	20	29	24	23	29	25	18	19	14	13	232
Landing gear collapsed/retracted	25	17	27	27	23	19	17	18	18	7	11	209
Nose down/Overtuned	20	17	27	33	29	23	21	19	25	14	17	245
Loss of control	19	22	2	3	6	3	4	0	3	4	2	68
Hard landing	13	14	10	17	19	16	17	7	11	4	11	139
Collision with terrain	12	21	20	12	7	11	10	8	4	6	10	121
Wheels-up landing	10	7	10	9	4	5	7	1	3	2	0	58
Precautionary/forced landing / Ditching	11	5	12	18	18	7	7	9	7	8	10	112
Other events	45	28	77	77	50	58	53	53	51	31	58	581
<b>Post-impact</b>	<b>13</b>	<b>16</b>	<b>37</b>	<b>57</b>	<b>41</b>	<b>44</b>	<b>31</b>	<b>9</b>	<b>6</b>	<b>9</b>	<b>10</b>	<b>273</b>
Fire/Explosion/Fumes	7	6	13	9	5	7	5	4	0	2	5	63
Other events	6	12	24	49	37	38	26	5	6	7	5	215

Data extracted 12 March 2024

<sup>1</sup> Breakdowns do not add up to totals. For example, in the take-off phase, if an occurrence involves both "Loss of control" and "Power loss" events, the occurrence is counted in each event category, but only once in the phase total.

**Table 12. Helicopter accidents, by selected event category and phase of flight,<sup>1</sup> 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
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<b>Standing/Taxiing</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>22</b>
Collision with terrain	0	0	1	0	0	0	0	0	0	1	0	2
Loss of control	0	2	1	0	0	0	2	0	1	0	1	7
Collision with object	0	2	1	0	1	1	1	0	0	0	3	9
Other events	1	4	0	0	0	4	2	0	2	1	3	17
<b>Takeoff</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>60</b>
Loss of control	0	5	1	4	4	1	3	0	4	1	1	24
Collision with terrain	2	1	2	1	1	2	2	0	1	1	3	16
Collision with object	2	2	1	0	1	2	3	0	2	1	2	16
Power loss	1	1	0	1	0	0	0	0	1	1	0	5
Other events	2	4	1	3	2	2	4	1	6	2	3	30
<b>En route</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>5</b>	<b>53</b>
Collision with terrain	1	3	1	1	1	2	2	1	2	0	1	15
Power loss	1	1	1	3	0	1	1	1	2	0	0	11
Precautionary/forced landing / Ditching	1	0	1	0	0	0	0	0	1	0	0	3
Component/system related	1	0	1	0	0	0	1	0	2	0	1	6
Other events	4	5	3	4	3	5	1	5	6	2	5	43
<b>Manoeuvring</b>	<b>8</b>	<b>4</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>4</b>	<b>9</b>	<b>6</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>80</b>
Collision with terrain	5	2	3	5	3	2	2	2	3	4	4	35
Loss of control	2	2	2	3	4	0	2	2	4	2	0	23
Collision with object	2	1	1	3	3	1	4	2	2	1	2	22
Operations related event	1	0	2	5	3	1	6	1	1	0	3	23
Power loss	1	0	2	1	1	0	1	0	0	0	0	6
Other events	2	2	5	5	5	2	7	5	4	5	5	47
<b>Approach</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>30</b>
Collision with terrain	0	0	0	1	0	0	0	0	2	0	1	4
Power loss	0	1	1	3	0	0	0	0	1	0	1	7
Loss of control	0	1	1	2	1	1	0	0	0	0	2	8
Collision with object	0	1	0	1	1	0	0	0	0	0	0	3
Other events	3	2	2	4	1	1	2	1	2	2	3	23
<b>Landing</b>	<b>12</b>	<b>12</b>	<b>18</b>	<b>16</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>12</b>	<b>15</b>	<b>144</b>
Hard landing	1	3	1	0	1	2	0	0	0	2	1	11
Collision with terrain	0	3	6	0	0	2	1	1	0	3	4	20
Loss of control	2	4	6	2	1	2	3	6	2	4	5	37
Collision with object	5	5	1	4	3	6	2	5	2	0	2	35
Other events	9	5	10	4	5	5	7	5	3	4	6	63
<b>Post-impact</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>11</b>	<b>1</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>45</b>
Fire/Explosion/Fumes	2	0	1	0	0	0	3	2	2	0	0	10
Other events	1	2	4	11	1	6	4	0	4	3	2	38

Data extracted 12 March 2024

<sup>1</sup> Breakdowns do not add up to totals. For example, in the take-off phase, if an occurrence involves both "Loss of control" and "Power loss" events, the occurrence is counted in each event category, but only once in the phase total.

**Table 13. Fatal airplane accidents, by phase of flight and selected event category,<sup>1</sup> 2013 to 2023**

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
<b>Standing/Taxiing</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>
Collision with object	0	0	0	0	0	0	0	0	0	0	0	0
Collision with moving aircraft	0	0	0	0	0	0	0	0	0	0	0	0
Nose down/Overturned	0	0	0	0	0	0	0	0	0	0	0	0
Landing gear collapsed/retracted	0	0	0	0	0	0	0	0	0	0	0	0
Loss of control	0	0	0	0	0	0	0	0	0	0	0	0
Other events	1	0	1	2	1	0	1	1	0	0	0	7
<b>Takeoff</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>52</b>
Collision with terrain	3	0	4	4	5	2	5	0	6	1	4	34
Loss of control	2	1	4	4	2	2	2	0	3	0	0	20
Collision with object	0	0	1	0	1	1	1	0	0	1	0	5
Takeoff/landing event	1	1	0	0	1	0	0	1	1	0	0	5
Power loss	0	1	1	1	1	0	1	0	0	0	1	6
Other events	2	0	7	1	4	4	3	1	5	2	0	29
<b>En route</b>	<b>9</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>58</b>
Power loss	0	0	0	2	0	1	2	0	0	0	1	6
Precautionary/forced landing / Ditching	0	0	0	1	0	0	1	0	1	0	0	3
Collision with terrain	7	3	4	4	3	5	6	1	3	2	3	41
Component/system related	0	0	1	0	0	0	0	0	0	0	0	1
Other events	5	1	6	2	4	5	7	1	3	3	3	40
<b>Manoeuvring</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>37</b>
Collision with terrain	2	1	4	4	4	3	4	3	0	4	1	30
Loss of control	0	1	0	2	2	4	0	1	0	2	1	13
Collision with object	0	0	1	1	1	0	0	1	0	1	0	5
Power loss	0	0	0	0	0	0	0	0	0	0	0	0
Other events	1	1	0	1	1	3	2	1	0	3	1	14
<b>Approach</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>36</b>
Collision with terrain	5	0	3	3	3	2	2	0	1	4	2	25
Power loss	1	0	0	0	0	0	0	0	0	0	0	1
Collision with object	0	0	1	1	1	0	0	0	0	3	0	6
Component/system related	0	0	0	0	1	0	2	0	0	0	0	3
Precautionary/forced landing / Ditching	0	0	0	0	0	0	0	0	0	0	0	0
Loss of control	2	0	0	1	0	0	1	0	0	3	1	8
Other events	1	1	2	2	2	2	3	0	0	1	1	15
<b>Landing</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>26</b>
Missed or went off runway	0	1	0	1	0	0	0	0	0	0	0	2
Collision with object	0	0	1	1	0	1	2	0	2	0	0	7
Landing gear collapsed/retracted	0	0	0	0	0	0	0	0	0	0	0	0
Nose down/Overturned	2	1	0	0	0	1	2	0	0	0	0	6
Loss of control	1	0	0	0	0	0	0	0	0	0	0	1
Hard landing	0	0	0	0	0	0	0	0	0	0	0	0
Collision with terrain	2	2	2	4	0	0	1	0	0	0	1	12
Wheels-up landing	0	0	0	0	0	0	0	0	0	0	0	0
Precautionary/forced landing / Ditching	1	0	1	0	0	0	0	0	0	0	0	2
Other events	0	2	1	3	0	1	2	0	2	0	2	13
<b>Post-impact</b>	<b>8</b>	<b>4</b>	<b>10</b>	<b>9</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>56</b>
Fire/Explosion/Fumes	7	3	10	7	4	6	3	1	0	2	4	47
Other events	1	2	0	2	1	2	1	0	0	1	0	10

Data extracted 12 March 2024

<sup>1</sup> Breakdowns do not add up to totals. For example, in the takeoff phase, if an occurrence involves both "Loss of control" and "Power loss" events, the occurrence is counted in each event category, but only once in the phase total.

Table 14. Fatal helicopter accidents, by phase of flight and selected event category,<sup>1</sup> 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
<b>Standing/Taxiing</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
Collision with terrain	0	0	0	0	0	0	0	0	0	0	0	0
Loss of control	0	0	0	0	0	0	0	0	0	0	1	1
Collision with object	0	0	0	0	0	0	0	0	0	0	1	1
Other events	0	0	0	0	0	0	0	0	0	0	1	1
<b>Takeoff</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>6</b>
Loss of control	0	0	0	0	0	0	0	0	0	0	0	0
Collision with terrain	1	0	1	0	0	0	0	0	0	0	1	3
Collision with object	1	0	1	0	0	0	0	0	0	0	1	3
Power loss	0	0	0	0	0	0	0	0	0	1	0	1
Other events	0	0	0	0	0	0	0	1	0	1	0	2
<b>En route</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>16</b>
Collision with terrain	1	0	1	1	0	2	2	0	1	0	0	8
Power loss	0	0	0	0	0	0	1	0	0	0	0	1
Precautionary/forced landing/Ditching	0	0	0	0	0	0	0	0	0	0	0	0
Component/system related	0	0	0	0	0	0	1	0	0	0	0	1
Other events	2	0	1	1	1	3	0	0	2	1	0	11
<b>Manoeuvring</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>16</b>
Collision with terrain	2	0	1	0	1	1	0	1	2	1	1	10
Loss of control	1	0	0	0	1	0	0	1	1	0	0	4
Collision with object	0	0	0	1	1	0	0	0	0	0	0	2
Operations related event	0	0	0	0	1	0	1	1	0	0	1	4
Power loss	0	0	1	0	0	0	0	0	0	0	0	1
Other events	0	0	0	1	1	0	1	1	1	1	1	7
<b>Approach</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>
Collision with terrain	0	0	0	0	0	0	0	0	1	0	0	1
Power loss	0	0	0	0	0	0	0	0	0	0	0	0
Loss of control	0	0	0	0	0	0	0	0	0	0	0	0
Collision with object	0	0	0	0	0	0	0	0	0	0	0	0
Other events	0	0	0	0	0	0	1	0	1	1	0	3
<b>Landing</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>
Hard landing	0	0	0	0	0	0	0	0	0	0	0	0
Collision with terrain	0	0	1	0	0	0	0	0	0	0	0	1
Loss of control	0	0	1	0	0	0	0	0	0	0	0	1
Collision with object	0	0	0	1	0	2	0	0	0	0	0	3
Other events	0	0	0	0	0	0	1	0	0	0	0	1
<b>Post-impact</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>6</b>
Fire/Explosion/Fumes	1	0	1	0	0	0	0	1	1	0	0	4
Other events	1	0	0	0	0	0	0	0	0	1	0	2

Data extracted 12 March 2024

<sup>1</sup> Breakdowns do not add up to totals. For example, in the take-off phase, if an occurrence involves both "Loss of control" and "Power loss" events, the occurrence is counted in each event category, but only once in the phase total.

# Definitions

The following definitions apply to air transportation occurrences that are required to be reported pursuant to the *Canadian Transportation Accident Investigation and Safety Board Act* and the *Transportation Safety Board Regulations*.

## Aviation occurrence

- any accident or incident associated with the operation of an aircraft, and
- any situation or condition that the Board has reasonable grounds to believe could, if left unattended, induce an accident or incident described below.

## Reportable aviation accident

An aviation accident is an occurrence resulting directly from the operation of an aircraft in which

- a. a person is killed or sustains a serious injury as a result of
  - i. being on board the aircraft,
  - ii. coming into direct contact with any part of the aircraft, including parts that have become detached from the aircraft, or
  - iii. being directly exposed to jet blast, rotor down wash or propeller wash;
- b. the aircraft sustains structural failure or damage that adversely affects the aircraft's structural strength, performance or flight characteristics and would normally require major repair or replacement of any affected component, except for
  - i. engine failure or damage, when the damage is limited to the engine, its cowlings or accessories, or
  - ii. damage limited to propellers, wing tips, antennae, tires, brakes, fairings or small dents or puncture holes in the aircraft's skin; or
- c. the aircraft is missing or inaccessible.

## Reportable aviation incident

An aviation incident is an occurrence resulting directly from the operation of an aircraft having a maximum certificated take-off weight greater than 2250 kg or of an aircraft being operated under an air operator certificate issued under Part VII of the *Canadian Aviation Regulations* in which,

- a. an engine fails or is shut down as a precautionary measure;
- b. a power train transmission gearbox malfunction occurs;
- c. smoke is detected or a fire occurs on board;
- d. difficulties in controlling the aircraft are encountered owing to any aircraft system malfunction, weather phenomena, wake turbulence, uncontrolled vibrations or operations outside the flight envelope;
- e. the aircraft fails to remain within the intended landing or take-off area, lands with all or part of the landing gear retracted or drags a wing tip, an engine pod or any other part of the aircraft;

- f. a crew member whose duties are directly related to the safe operation of the aircraft is unable to perform their duties as a result of a physical incapacitation which poses a threat to the safety of persons, property or the environment;
- g. depressurization of the aircraft occurs that requires an emergency descent;
- h. a fuel shortage occurs that requires a diversion or requires approach and landing priority at the destination of the aircraft;
- i. the aircraft is refuelled with the incorrect type of fuel or contaminated fuel;
- j. a minor collision, a risk of collision or a loss of separation occurs;
- k. a crew member declares an emergency or indicates an emergency that requires priority handling by air traffic services or the standing by of emergency response services;
- l. a slung load is released unintentionally or as a precautionary or emergency measure from the aircraft; or
- m. any dangerous goods are released in or from the aircraft.

## **Collision**

Collision means an impact, other than an impact associated with normal operating circumstances, between aircraft or between an aircraft and another object or terrain.

## **Risk of collision**

Risk of collision means a situation in which an aircraft comes so close to being involved in a collision that a threat to the safety of any person, property or the environment exists.

## **Loss of separation**

Loss of separation means a situation in which the distance separating two aircraft is less than the minimum established in the *Canadian Domestic Air Traffic Control Separation Standards*, published by the Department of Transport, as amended from time to time.

## **Serious injury**

- a fracture of any bone, except simple fractures of fingers, toes or the nose;
- lacerations that cause severe hemorrhage or nerve, muscle or tendon damage,
- an injury to an internal organ;
- second or third degree burns, or any burns affecting more than 5% of the body surface;
- a verified exposure to infectious substances or injurious radiation; or
- an injury that is likely to require hospitalization.

## **Operation**

Operation means the activities for which an aircraft is used from the time any person boards the aircraft with the intention of flight until they disembark.

## **Operator**

Operator has the same meaning as in subsection 101.01(1) of the *Canadian Aviation Regulations*.

## **Commercial operators**

Commercial operators include carriers that offer a “for-hire” service to transport people or goods, or to undertake specific tasks such as aerial photography, flight training, or crop spraying.

### **Airliner**

An airplane used by a Canadian air operator in an air transport service or in aerial work involving sightseeing operations, that has a MCTOW of more than 8 618 kg (19 000 pounds) or for which a Canadian type certificate has been issued authorizing the transport of 20 or more passengers.

### **Commuter aircraft**

An airplane used by a Canadian air operator, in an air transport service or in aerial work involving sightseeing operations, in which the aircraft is

- a multi-engined aircraft that has a MCTOW of 8 618 kg (19 000 pounds) or less and a seating configuration, excluding pilot seats, of 10 to 19, inclusive; or
- a turbo jet powered airplane that has a maximum zero fuel weight of 22 680 kg (50 000 pounds) or less and for which a Canadian type certificate has been issued authorizing the transport of not more than 19 passengers.

### **Aerial work aircraft**

A commercially operated airplane or helicopter used in aerial work involving

- the carriage on board of persons other than flight crew members;
- the carriage of helicopter external loads;
- the towing of objects; or
- the dispersal of products.

### **Air taxi aircraft**

A commercially operated aircraft used in an air transport service or in aerial work involving sightseeing operations, in which the aircraft is

- a single engined aircraft;
- a multi engined aircraft, other than a turbo jet powered airplane, that has a MCTOW of 8 618 kg (19 000 pounds) or less and a seating configuration, excluding pilot seats, of nine or less; or
- any aircraft that is authorized by the Minister of Transport to be operated under Part VII, Subpart 3, Division 1 of the CARs.

## **State operators**

State operators include the federal and provincial governments.

## **Private operators**

Private operator means the holder of a private operator registration document issued under subsection 604.04(2) of the CARs.

## **Recreational operators**

Recreational operators cannot operate under Part VII of the CARs, or transport people or cargo on a “for-hire” basis.