



**Australian Government**

**Department of Infrastructure, Transport,  
Regional Development, Communications and the Arts**  
Bureau of Infrastructure and Transport Research Economics

## STATISTICAL REPORT



# Aviation

**Australian Aircraft Activity  
2021**

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# Highlights

## Total hours flown increased in 2021

Total hours flown by Australian aircraft was 2.62 million in 2021, an increase of 6.1 per cent compared with the previous year (see Table 1 and Figure 1). This is made up of VH-registered aircraft and Sports and Recreation Association registered aircraft.

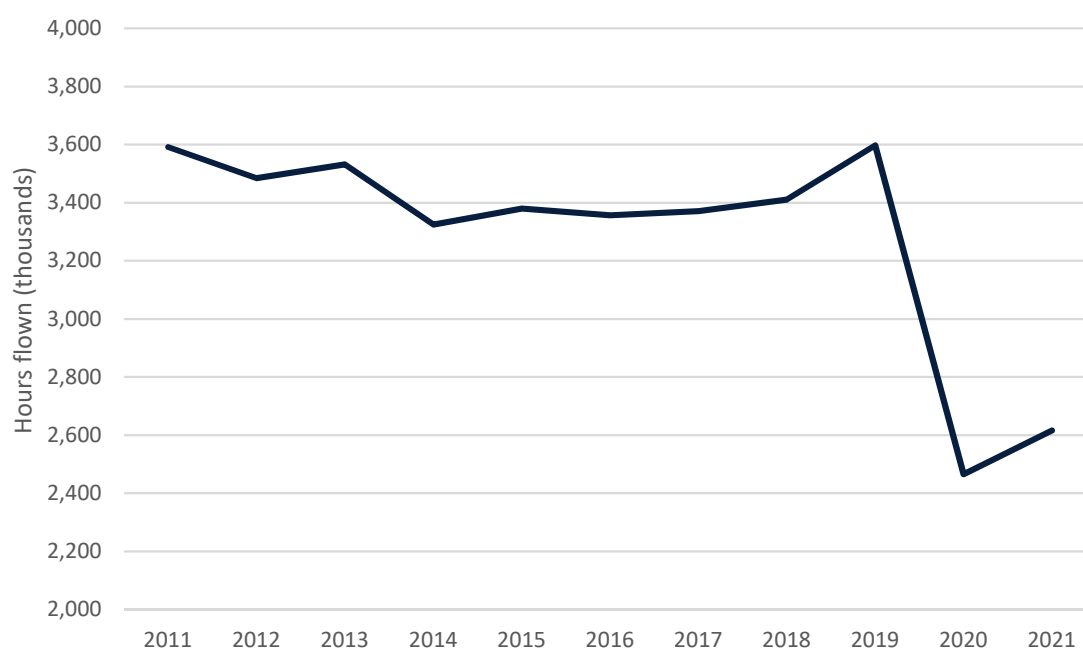
VH-aircraft are registered on the civil aircraft register by the Civil Aviation Safety Authority (CASA). Sports and recreation association registered aircraft are registered with one of the four associations (Recreational Aviation Australia (RA-Aus), Gliding Federation of Australia (GFA), Hang Gliding Federation of Australia (HGFA) or the Australian Sport Rotorcraft Association (ASRA)). These associations operate under self-administration, with CASA setting the regulations and then working with the self-administering organisations to ensure the regulations are applied and enforced.

Total airline Regular Public Transport (RPT) flying hours rose 19.0 per cent in 2021 to 623,883 hours (see Table 1). RPT refers to all air service operations in which aircraft are available for the transport of members of the public and are conducted in accordance with fixed schedules. Other VH-registered aircraft flying hours rose 2.9 per cent in 2021 to 1.63 million hours (see Table 1).

The sports and recreation associations registered sector recorded 360,889 flying hours in 2021, an increase of 1.6 per cent compared to 2020 (see Table 1).

Figure 1 shows the flying hours performed by Australian aircraft.

Figure 1 Australian aircraft fleet hours flown (2011–2021)



## The General Aviation and Commercial Air Transport VH-registered fleet

The total number of hours flown by general aviation and commercial air transport VH-registered aircraft for the year ending 31 December 2021 was 2.26 million. This consisted of 1.11 million hours in commercial air transport and 1.15 million hours in general aviation (see Table 7).

The total number of landings by general aviation and commercial air transport VH-registered aircraft for the year ending 31 December 2020 was 2.59 million. This consisted of 961,280 landings in commercial air transport and 1.62 million landings in general aviation (see Table 7).

The general aviation and commercial air transport VH-registered fleets include 14,069 aircraft on the Civil Aviation Aircraft Register (Table 3). The number of aircraft registered at 31 December 2021 represents an increase of 2.3 per cent over the number registered at 31 December 2020 (13,750 aircraft).

Commercial air transport consists of two sectors, scheduled and non-scheduled. The scheduled sector of commercial air transport operates flights according to schedules drawn up to cover several months or even years at a time (e.g. airlines anybody can buy tickets for). Whereas the non-scheduled sector refers to commercial air transport that operates without fixed or published flying schedules (often referred to as charter). Scheduled commercial air transport experienced a large rise compared to 2020, recording 623,883 hours (up 19.0 per cent). Non-scheduled commercial air transport also rose compared to 2020, recording 483,694 hours (up 10.1 per cent). Within scheduled, the largest activity was domestic, with 585,530 hours. While in non-scheduled, passenger transport charters was the largest activity with 324,402 hours (see Table 7).

General aviation consists of five different sectors of flying. Aerial work (506,207 hours, up 10.2 per cent compared to 2020), own use business (123,897 hours, up 11.8 per cent compared to 2020), instructional flying (303,362 hours, down 20.8 per cent compared to 2020), sport and pleasure flying (174,520 hours, up 0.9 per cent compared to 2020), and other flying (39,776 hours, up 97.6 per cent compared to 2020). The largest flying activity in aerial work was agricultural mustering, recording 153,303 hours. Commercial instructional flying activity made up the majority of the instructional flying sector, recording 274,344 hours. While within the sport and pleasure flying sector the largest flying activity was pleasure and personal transport, recording 113,376 hours (see Table 7).

Figure 2 shows the flying hours performed by VH-registered aircraft by the major industry sectors.

Figure 2 VH-registered fleet hours flown, by major industry sectors (2020-2021)

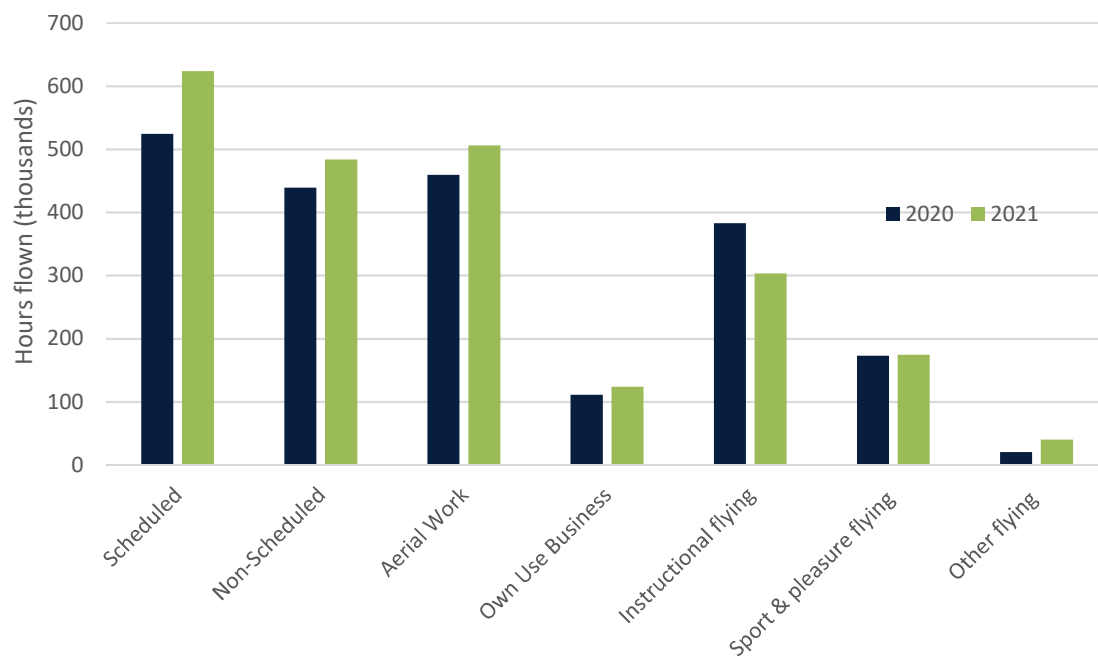
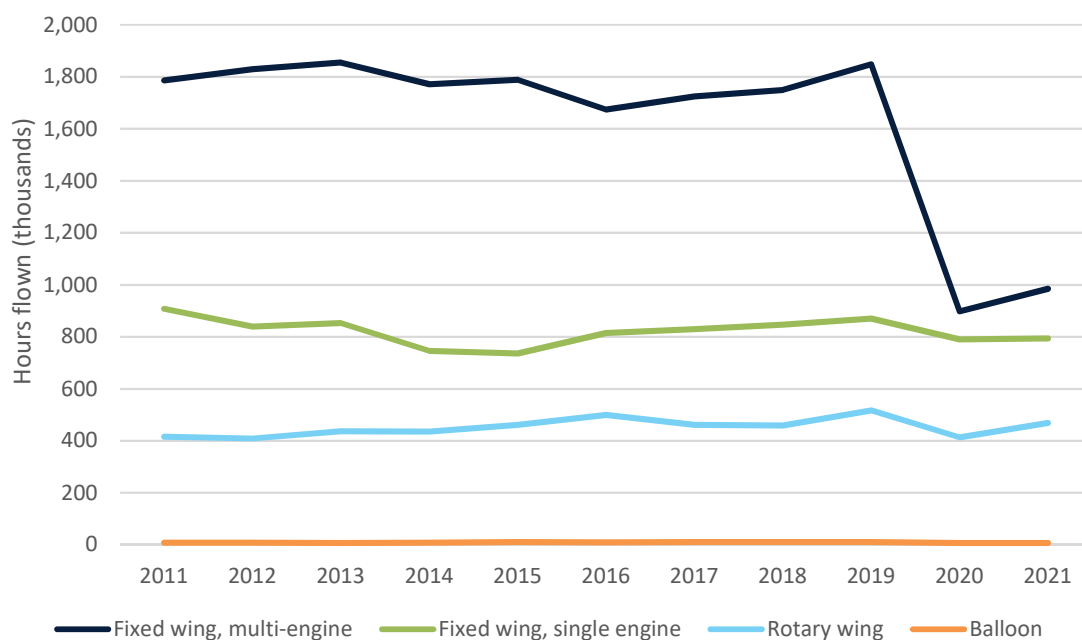


Figure 3 shows the flying hours performed by VH-registered aircraft by the major categories of aircraft.

Figure 3 VH-registered fleet hours flown, by category of aircraft (2011–2021)





Fixed wing, multi-engine aircraft are larger airplanes predominately used in commercial air transport. Fixed wing, single engine aircraft are smaller airplanes predominately used for instructional flying, pleasure and personal transport and own use business flying. Rotary wing aircraft are helicopters predominately used in for agricultural mustering, other aerial work and passenger charter transport. Hot air balloons are used primarily for sport and pleasure flying and sightseeing.

The number of fixed wing, single engine aircraft increased by 1.7 per cent to 9,040 compared to 2020, or 64.3 per cent of all registered aircraft in the general aviation and commercial air transport VH-registered fleet (see Table 4).

Fixed wing, multi-engine aircraft increased by 2.6 per cent in 2021, to 2,279 (16.2 per cent of the total) compared to 2020 (see Table 4).

In 2021, the number of helicopters increased by 5.0 per cent to 2,351 (16.7 per cent of the total), with the number of single engine helicopters increasing by 4.6 per cent to 2,065. The number of multi-engine helicopters increased by 7.9 per cent to 286 (see Table 4).

Hot-air balloons and airships remained at 399, or 2.8 per cent of total aircraft in 2021 (see Table 4).

The Australian general aviation and commercial air transport VH-registered fleet contains many older aircraft, with the average age being 37.2 years for fixed wing aircraft, compared to 21.1 years for rotary aircraft and 14.8 years for balloons and airships (see Table 4).

About one in every four (3,541 aircraft) general aviation and commercial air transport VH-registered aircraft reported performing no flying during the year ended 31 December 2021.

Reasons were provided for 3,510 of these aircraft for why they did not fly in 2021 (see Table 13), with the most common reason being "Repair/maintenance/restoration" (reported by 43.3 per cent of these aircraft).

## The Sport and Recreational registered fleet

The sport and recreational registered aircraft fleet in 2021 consisted of 7,713 aircraft, which flew a total of 360,889 hours (see Table 5).

### Ultralight flying

#### **Information collected by General Aviation Activity Survey**

BITRE recommends caution when using these statistics due to the low response rate (50.8 per cent) for Recreational Aviation Australia aircraft in their second year being included in the General Aviation Activity Survey.

In 2021, ultralight aircraft flew a total of 168,434 hours, representing an increase of 1.0 per cent over 2020 (see Table 12).

At the end of December 2021, a total of 3,091 aircraft had current registrations issued by Recreational Aviation Australia, a decrease of 6.7 per cent over 2020 (3,313 aircraft) (see Table 5).

### Gliding

#### **Information provided by the Gliding Federation of Australia (GFA)**

The number of registered gliders in 2021 was 1,273, a decrease of 1.1 per cent compared with December 2020 (see Table 5). The total number of reported flying hours decreased by 6.2 per cent to 46,629 hours in 2020-21 compared with 2019-20 (see Table 1).

### Hang gliding

#### **Information provided by the Hang Gliding Federation of Australia (HGFA)**

The total number of hours flown by hang gliders in 2020-21 decreased by 4.8 per cent on the previous year to 92,558 hours (see Table 1).

### Gyroplanes

#### **Information provided by the Australian Sport Rotorcraft Association (ASRA)**

The number of gyroplanes in 2021 was 328 (see Table 5). The total number of estimated hours flown by gyroplanes in 2021 increased by 23.0 per cent to 53,268 hours, compared with 2020 (see Table 1).

# Tables

**Table 1** Total hours flown by industry sector (1992-2021)

Year	Total scheduled <sup>a</sup>	Other VH-registered aircraft <sup>b</sup>	Ultralight flying	Gliding <sup>c</sup>	Hang gliding <sup>d</sup>	Gyroplanes <sup>e</sup>	Total
(thousand hours)							
1992	750.3	1,651.0	52.4	83.3	73.5	..	2,610.4
1993	781.2	1,703.9	56.8	73.0	86.2	..	2,701.1
1994	838.7	1,715.7	73.0	80.1	77.6	15.0	2,800.1
1995	899.6	1,761.3	72.0	75.9	86.4	14.4	2,909.6
1996	938.5	1,799.0	70.4	69.2	103.2	23.3	3,003.7
1997	969.8	1,839.3	75.1	68.9	102.3	23.3	3,078.7
1998	958.2	1,877.9	67.6	65.4	87.5	33.4	3,090.0
1999	963.5	1,842.2	73.9	63.9	104.6	30.4	3,078.5
2000	1,074.2	1,714.8	74.1	..	106.7	29.7	2,999.5
2001	1,044.3	1,702.9	76.5	..	120.0	37.0	2,980.6
2002	926.0	1,687.7	80.6	..	122.2	32.3	2,848.9
2003	969.0	1,645.9	84.5	..	124.7	28.3	2,852.5
2004	1,090.4	1,645.0	87.1	..	132.0	29.3	2,983.7
2005	1,144.1	1,722.8	92.9	194.7	134.2	32.9	3,321.6
2006	1,156.7	1,695.0	120.2	228.9	103.0	27.9	3,331.6
2007	1,191.6	1,831.8	138.3	343.4	94.5	28.0	3,627.6
2008	1,250.5	1,857.7	156.2	169.9	88.3	30.5	3,553.1
2009	1,241.4	1,807.5	174.3	198.4	96.0	35.6	3,553.2
2010	1,325.7	1,847.7	200.4	228.7	97.9	44.4	3,744.9
2011	1,347.4	1,771.4	198.6	126.9	98.7	48.6	3,591.5
2012	1,382.1	1,704.9	187.9	57.8	105.1	46.8	3,484.6
2013	1,410.7	1,741.8	153.5	63.6	117.2	44.9	3,531.8
2014	1,402.1	1,526.4	176.1	67.7	113.8	38.9	3,324.9
2015	1,440.0	1,552.3	167.0	66.1	110.9	43.5	3,379.7
2016	1,389.4	1,608.8	148.2	65.1	107.7	37.0	3,356.2
2017	1,427.1	1,600.4	144.0	56.4	103.5	40.0	3,371.4
2018	1,423.9	1,642.3	126.4	58.0	117.8	42.0	3,410.4
2019	1,526.3	1,719.7	142.7	59.3	101.4	47.7	3,597.1
2020	524.2	1,585.4	166.8	48.0	97.2	43.3	2,464.9
2021	623.9	1,631.5	168.4	46.6	92.6	53.3	2,616.2

<sup>a</sup> Hours flown by Australian (including regional) airlines on domestic and international flight stages in scheduled operations.

From August 2004 RPT freight operations are included.

<sup>b</sup> Includes hours flown in general aviation as well as non-scheduled commercial air transport (charter).

<sup>c</sup> Year ended 30 April prior to 2000. No data are available between 2000 and 2004. Data from 2005-2010 are for year ended 30 June. Data from 2011 are for calendar year.

<sup>d</sup> Year ended 30 June.

<sup>e</sup> Year ended 30 June until 2005. From 2006 onwards, calendar year data are provided.

Table 2 Hours flown and percentage change, by industry sector and flying activity (2019-2021)

Flying Activity	2019 <sup>a</sup>		2020 <sup>a</sup>		2021 <sup>a</sup>	
	Hours flown (thousands)	Percentage change over 2018	Hours flown (thousands)	Percentage change over 2019	Hours flown (thousands)	Percentage change over 2020
Scheduled	1,526.3	7.2%	524.2	-65.7%	623.9	19.0%
Non-scheduled <sup>b</sup>	354.2	-4.5%	351.8	-0.7%	409.0	16.3%
Private	163.3	-3.0%	145.4	-10.9%	139.4	-4.1%
Business	146.4	9.3%	110.8	-24.3%	123.9	11.8%
Test & ferry	32.5	12.0%	20.1	-38.1%	39.8	97.6%
Training	422.7	8.4%	382.9	-9.4%	303.4	-20.8%
Agriculture	83.5	-11.5%	108.4	29.9%	158.8	46.5%
Survey & photography	43.4	0.2%	41.2	-5.2%	40.4	-1.9%
Pipe & powerline patrol	31.8	-13.9%	33.7	5.7%	40.5	20.4%
Mustering	152.8	11.4%	140.0	-8.4%	153.3	9.5%
Search & rescue	8.0	-38.9%	18.4	131.2%	8.0	-56.3%
Ambulance	111.6	4.6%	111.6	0.0%	106.0	-5.0%
Towing	4.4	1.8%	4.0	-9.3%	4.3	7.4%
Other aerial work	165.1	44.5%	117.1	-29.1%	104.7	-10.6%
Total hours flown	3,246.0	5.9%	2,109.6	-35.0%	2,255.3	6.9%

Note: includes data from General Aviation Activity Survey.

<sup>a</sup> Activity classifications based on 2013 categories.

<sup>b</sup> Excludes air ambulance which was reclassified from general aviation to commercial air transport from 2014.

Table 3 Number of aircraft, landings and hours flown in General Aviation and Commercial Air Transport operations by state or territory (2021)<sup>a</sup>

State or Territory	Number of aircraft		Number of landings (thousands)	Commercial air transport		General aviation		Total hours flown (thousands)
	Total	Active <sup>b</sup>		No. Active aircraft <sup>b</sup>	Hours flown (thousands)	No. Active aircraft <sup>b</sup>	Hours flown (thousands)	
Intrastate								
NSW	3,943	2,829	714.7	496	307.7	2,801	295.9	603.6
QLD	3,255	2,483	569.5	634	126.1	2,423	310.9	437.1
VIC	2,842	2,026	340.9	273	46.1	1,958	188.6	234.8
WA	1,837	1,419	360.0	479	144.6	1,281	176.6	321.1
SA	891	700	210.5	127	33.5	666	89.8	123.3
NT	715	550	174.7	287	111.6	407	63.2	174.7
TAS	210	173	43.3	40	11.3	149	16.8	28.1
ACT	104	76	9.4	12	1.3	68	6.0	7.3
Interstate	250	250	152.8	250	305.0			305.0
International	22	22	9.8	22	20.3			20.3
Australia	14,069	10,528	2,585.6	2,620	1,107.6	9,753	1,147.8	2,255.3

Note: includes data from General Aviation Activity survey

Note: major airlines are classified to interstate and international

<sup>a</sup> VH-registered aircraft only

<sup>b</sup> General aviation and commercial air transport active aircraft may exceed total active aircraft as some aircraft may operate in both categories.

Table 4 Australian aircraft fleet, VH-registered (2021)

Aircraft make	Number of aircraft	Average age of aircraft <sup>a</sup>	Hours flown	Landings
		(years)	(thousands)	
Fixed wing, single-engine				
Cessna	3,085	42.3	350.3	449.5
Piper	1,401	46.6	106.7	165.2
Air Tractor	203	18.3	74.5	154.5
Pilatus	66	12.4	46.7	42.8
Diamond	117	11.6	40.9	89.6
Amateur-built	1,479	17.4	39.3	55.6
Cirrus	207	10.2	18.7	17.8
Ayres	62	25.5	18.1	33.8
Aerospatiale/Eurocopter	77	17.8	15.4	22.8
Beechcraft	339	45.2	14.2	13.9
Other	2,004	49.7	69.1	139.2
Subtotal	9,040	38.4	793.9	1,184.9
Fixed wing, multi-engine				
Boeing	217	12.7	291.5	138.0
Airbus	124	12.8	148.5	74.3
Bombardier	95	14.5	129.7	111.0
Beechcraft	391	36.4	96.3	91.5
Cessna	387	38.4	62.3	53.8
Piper	414	42.1	50.0	52.8
Saab	67	27.2	41.5	44.0
Fokker	78	28.7	38.3	24.0
Embraer	51	20.3	21.1	14.3
Fairchild	43	32.8	14.1	15.0
Other	412	36.5	91.7	79.9
Subtotal	2,279	32.4	985.1	698.6
Total	11,319	37.2	1,779.0	1,883.4

Table 4 (continued) Australian aircraft fleet, VH-registered (2021)

Helicopter make	Number of aircraft	Average age of aircraft <sup>a</sup>	Hours flown	Landings
		(years)	(thousands)	
Rotary wing, single-engine				
Robinson	1,217	14.8	264.0	325.9
Bell	329	38.6	53.2	111.8
Aerospatiale/Eurocopter	212	23.6	41.0	62.6
Schweizer	37	21.1	4.5	5.2
Airbus	24	4.7	4.4	8.6
Agusta	27	45.1	3.5	5.0
Guimbal	12	7.8	3.2	3.3
Hughes	22	45.6	3.0	4.3
Amateur-built	99	15.7	2.7	2.7
McDonnell Douglas	8	33.6	1.9	1.7
Other	78	43.1	8.4	12.0
Subtotal	2,065	21.3	389.7	543.0
Rotary wing, multi-engine				
Agusta	87	8.7	34.7	72.1
Bell	73	24.0	11.5	20.7
Sikorsky	21	16.3	9.5	8.9
Airbus	11	3.8	6.4	23.2
Aerospatiale/Eurocopter	34	31.9	5.5	7.2
Other	60	25.8	11.4	19.4
Subtotal	286	19.3	79.1	151.4
Total	2,351	21.1	468.8	694.4

Table 4 (continued) Australian aircraft fleet, VH-registered (2021)

Balloon or airship make	Number of aircraft	Average age of aircraft <sup>a</sup>	Hours flown	Landings
		(years)	(thousands)	
Kavanagh	276	12.7	6.3	6.5
Cameron	55	20.7	0.7	0.7
Balony	9	3.6	0.2	0.2
Amateur-built	20	9.4	0.2	0.2
Thunder/Colt	19	32.3	0.1	0.1
Other	20	20.9	0.1	0.1
<b>Total</b>	<b>399</b>	<b>14.8</b>	<b>7.6</b>	<b>7.8</b>

Note: includes data from General Aviation Activity survey

<sup>a</sup> As at end of 2021

Table 5 Australian aircraft fleet, sports and recreational registered aircraft (2021)

Aircraft	Number of aircraft	Hours flown (thousands)
Ultralight	3,091	168.4
Gliders	1,273	46.6
Hang gliders <sup>a</sup>	3,021	92.6
Gyroplanes	328	53.3
<b>Total</b>	<b>7,713</b>	<b>360.9</b>

Note: includes data from sport and recreational associations

<sup>a</sup> In lieu of number of aircraft, number of members is used

Table 6 Number of aircraft, by fuel type and hours flown in Australian fleet (2021)

Fuel type	Number of aircraft	Total hours flown (thousands)
<b>Fixed wing, single engine</b>		
Diesel	6	2.5
Avtur	558	207.5
Avgas	8,476	583.9
Subtotal	9,040	793.9
<b>Fixed wing, multi-engine</b>		
Diesel	6	1.2
Avtur	1,130	844.5
Avgas	1,143	139.3
Subtotal	2,279	985.1
Subtotal (fixed wing)	11,319	1,779.0
<b>Rotary wing, single engine</b>		
Avtur	655	112.4
Avgas	1,410	277.2
Subtotal	2,065	389.7
<b>Rotary wing, multi-engine</b>		
Avtur	286	79.1
Subtotal	286	79.1
Subtotal (rotary wing)	2,351	468.7
<b>Balloons and airships</b>		
N/A	399	7.6
<b>Total</b>	<b>14,069</b>	<b>2,255.3</b>

Note: includes data from General Aviation Activity survey



Table 7 Flying Activity by VH-registered aircraft (2021)

Industry sector and flying activity		Number of aircraft	Average age of aircraft <sup>a</sup>	Hours flown	Landings
			(years)	(thousands)	
<b>Commercial air transport</b>					
Scheduled	International	137	11.7	25.5	11.4
	Domestic	591	19.3	585.5	407.1
	Freight only	20	29.9	12.9	7.4
Non-scheduled	Passenger transport charters	2,200	25.8	324.4	385.5
	Air ambulance	208	15.4	106.0	118.2
	Freight only	120	23.9	49.2	25.3
	Other commercial air transport	36	27.8	4.1	6.4
<b>Total Commercial air transport</b>		2,620 <sup>b</sup>	24.8	1,107.6	961.3
<b>General aviation</b>					
Aerial work	Agricultural spreading/spraying	977	23.4	134.6	353.7
	Agricultural mustering	1,012	20.4	153.3	110.1
	Agriculture - other	845	23.0	24.2	23.8
	Construction - sling loads	35	28.9	2.2	2.2
	Construction - other	8	16.6	0.6	0.8
	Photography	102	27.5	5.6	3.3
	Pipeline or powerline surveying	783	21.9	17.2	16.3
	Other surveying	797	22.1	34.8	20.7
	Observation and patrol	728	22.1	23.3	10.7
	Search and rescue	119	19.0	8.0	8.8
	Policing	87	18.6	16.6	11.1
	Firefighting	893	21.5	16.2	22.6
	Advertising	9	33.6	0.4	0.3
	Other aerial work	1,071	24.3	69.1	109.1
Own use business	Own business travel	2,668	29.6	123.9	116.1
Instructional flying	Instructional flying - commercial	1,212	27.0	274.3	442.9
	Instructional flying - non-commercial	643	30.7	29.0	60.4
Sport & pleasure flying	Glider towing	51	53.0	3.9	29.4
	Parachute dropping	371	48.1	10.3	24.2
	Aerobatics	190	32.9	3.8	7.1
	Joyflights/sightseeing charters	429	24.2	31.2	55.5
	Pleasure and personal transport	3,443	38.0	113.4	141.8
	Community service flights	56	30.5	1.9	1.6
	Other sport and pleasure flying	439	31.8	10.0	14.6
Other flying	Test flights	474	26.2	1.9	4.2
	Ferry flights	819	23.4	15.7	11.3
	Other flights	632	24.1	22.1	21.5
<b>Total general aviation</b>		9,753 <sup>c</sup>	31.4	1,147.8	1,624.3
<b>Total</b>		10,528 <sup>d</sup>	31.2	2,255.3	2,585.6

Note: includes data from General Aviation Activity survey

<sup>a</sup> As at end of 2020

<sup>b</sup> The sum of all commercial air transport category's aircraft will exceed total commercial air transport aircraft as some aircraft operate in multiple categories.

<sup>c</sup> The sum of all general aviation category's aircraft will exceed total general aviation aircraft as some aircraft operate in multiple categories.

<sup>d</sup> The sum of total general aviation and total commercial air transport aircraft will exceed total aircraft as some aircraft operate in both industry sectors.

Table 8 Hours flown by broad activity type, by state or territory (2021), for VH-registered aircraft

State or Territory	Commercial air transport		General aviation					Total
	Scheduled	Non-scheduled	Aerial work	Own use business	Instructional flying	Sport & pleasure	Other flying	
(thousands)								
Intrastate								
NSW	201.3	106.5	131.7	31.7	70.0	43.5	18.9	603.6
QLD	22.1	104.1	154.5	43.7	59.8	45.1	7.8	437.1
VIC	15.3	30.9	40.8	15.7	90.5	37.0	4.6	234.8
WA	24.5	120.1	101.2	13.6	31.8	26.6	3.4	321.1
NT	23.4	88.2	43.9	10.2	3.2	3.9	2.0	174.7
SA	7.9	25.6	23.9	7.1	43.4	12.7	2.8	123.3
TAS	3.1	8.2	8.3	1.2	3.9	3.1	0.3	28.1
ACT	0.9	0.3	1.9	0.8	0.7	2.6	0.1	7.3
Interstate	305.0							305.0
International	20.3							20.3
Australia	623.9	483.7	506.2	123.9	303.4	174.5	39.8	2,255.3

Note: includes data from General Aviation Activity survey

Note: major airlines are classified to interstate and international

Table 9 Landings by broad activity type, by state or territory (2021), for VH-registered aircraft

State or Territory	Commercial air transport		General aviation					Total
	Scheduled	Non-scheduled	Aerial work	Own use business	Instructional flying	Sport & pleasure	Other flying	
(thousands)								
Intrastate								
NSW	168.3	86.0	239.1	30.7	110.7	66.8	13.1	714.7
QLD	26.9	147.7	187.3	39.7	93.3	65.5	9.0	569.5
VIC	14.4	41.4	62.8	15.0	142.4	59.1	5.8	340.9
WA	17.0	125.0	106.0	12.4	48.2	47.7	3.7	360.0
SA	7.7	33.3	45.1	6.7	94.8	20.0	3.0	210.5
NT	23.4	88.9	41.5	9.7	4.5	4.8	1.8	174.7
TAS	4.8	12.7	9.9	1.2	7.7	6.5	0.5	43.3
ACT	0.9	0.3	1.9	0.8	1.8	3.7	0.1	9.4
Interstate	152.8							152.8
International	9.8							9.8
Australia	425.9	535.4	693.6	116.1	503.4	274.2	37.0	2,585.6

Note: includes data from General Aviation Activity survey

Note: major airlines are classified to interstate and international

Table 10 Hours flown and landings by engine type (2021), for VH-registered aircraft

		Jet aircraft		Turbo-prop aircraft		Turbo-shaft aircraft		Piston engine aircraft	
		Hours flown	Landings	Hours flown	Landings	Hours flown	Landings	Hours flown	Landings
(thousands)									
Commercial air transport	Scheduled	422.1	220.9	195.0	197.5	0.0	0.0	6.8	7.5
	Non-scheduled	91.4	42.5	158.7	154.7	63.1	120.5	169.4	216.5
General aviation	Aerial work	6.2	2.7	128.7	231.1	105.4	188.8	265.9	270.9
	Own use business	5.0	3.8	8.8	7.9	7.6	10.5	102.5	93.8
	Instructional flying	0.8	1.2	6.0	8.1	5.9	9.4	290.6	484.7
	Sport & pleasure	0.9	1.1	9.1	19.1	5.9	17.2	152.4	230.4
	Other flying	10.7	3.7	8.5	7.3	3.7	6.0	16.7	19.8
<b>Total</b>		537.0	276.0	514.9	625.8	191.6	352.4	1,004.3	1,323.6

Note: includes data from General Aviation Activity survey

Table 11 Hours flown in Ultralight operations, by state and category of aircraft (2021)

State or Territory	Uncertified aircraft  CAO 95.10	Certified aircraft							Subtotal  (Certified aircraft)	Total
		Commercially manufactured			Amateur-built		Weight shift			
		CAO 95.25	CAO 95.55	CAO 101.55	CAO 95.55	CAO 101.28	Powered parachutes CAO 95.32	Trikes CAO 95.32		
		(thousands)								
QLD	0.6	2.5	24.3	1.1	13.7	0.7	5.1	1.9	49.3	49.8
NSW	0.8	1.2	19.9	1.4	11.8	0.4	6.0	3.1	43.9	44.7
VIC	0.4	0.5	16.9	1.3	8.4	0.6	2.8	4.5	34.9	35.3
SA	0.4	0.1	5.8	0.9	4.4	0.6	1.7	1.4	14.8	15.2
WA	0.1	0.4	6.9	0.1	4.2	0.1	0.9	1.8	14.3	14.5
TAS	0.1	0.3	2.2	0.4	1.2	0.1	0.7	0.2	4.9	5.0
NT	0.1	0.3	0.8	0.1	0.5	0.0	-	0.2	1.8	1.9
ACT	0.2	0.2	0.4	0.1	0.5	0.2	0.4	-	1.7	1.9
Australia	2.8	5.3	77.2	5.4	44.7	2.5	17.7	12.9	165.7	168.4

Note: BITRE recommends caution when using these statistics due to the low response rate (50.8 per cent) for RA-Aus aircraft in their second year being included in the General Aviation Activity Survey.

Table 12 Hours flown in Ultralight operations, by category of aircraft (2011–2021)

Year	Uncertified aircraft  CAO 95.10	Certified aircraft							Subtotal  (Certified aircraft)	Total
		Commercially manufactured			Amateur-built		Weight shift			
		CAO 95.25	CAO 95.55	CAO 101.55	CAO 95.55	CAO 101.28	Powered parachutes CAO 95.32	Trikes CAO 95.32		
		(thousands)								
2011	2.1	6.4	121.7	9.6	38.5	1.8	2.3	16.2	196.6	198.6
2012	1.0	6.9	125.1	8.5	34.0	1.4	2.9	8.1	186.9	187.9
2013	1.0	7.1	90.2	10.5	30.5	1.4	2.3	10.5	152.5	153.5
2014	2.4	7.8	112.8	7.7	32.0	1.4	2.6	9.4	173.7	176.1
2015	1.0	7.9	103.6	7.9	35.1	2.0	2.5	7.1	166.0	167.0
2016	1.0	4.8	93.8	5.8	29.9	1.5	4.4	7.1	147.2	148.2
2017	0.5	2.7	94.0	4.6	25.9	1.0	7.8	7.5	143.5	144.0
2018	0.5	2.1	75.5	7.4	21.7	0.7	10.7	7.7	125.9	126.4
2019	1.0	1.9	96.3	2.8	20.7	0.6	15.0	4.3	141.7	142.7
2020	3.2	6.5	73.5	5.9	46.1	4.4	12.1	15.1	163.6	166.8
2021	2.8	5.3	77.2	5.4	44.7	2.5	17.7	12.9	165.7	168.4

Note: BITRE recommends caution when using these statistics due to the low response rate (50.8 per cent) for RA-Aus aircraft in their second year being included in the General Aviation Activity Survey.

Table 13 Reasons for nil flying activity (2021)

Reason for nil activity	Number of aircraft	Percentage of reporting inactive aircraft
Repair / maintenance / restoration	1,519	43.3
Aircraft in storage	657	18.7
Aircraft unserviceable / unairworthy	247	7.0
Sold prior to 1 January 2021	174	5.0
Work or other commitments	123	3.5
Amateur-built aircraft not yet completed	97	2.8
Aircraft awaiting sale	95	2.7
Owner's health issues / deceased	84	2.4
Financial reasons	66	1.9
New aircraft	46	1.3
Lack of business / company ceased operating	45	1.3
Certificate of airworthiness not yet issued	42	1.2
This aircraft is unknown to the operator	26	0.7
Awaiting parts or modifications	24	0.7
Other	265	7.5
<b>Total</b>	<b>3,510</b>	<b>100.0</b>

Note: this table covers aircraft with zero hours reported and not those with reduced hours for any of the above reasons (for example, drought).

# Explanatory notes

The results presented in this report are based on BITRE's survey of Australian registered aircraft undertaking Commercial Air Transport and General Aviation activity. This survey provides statistics on the flying activity of all Australian-registered aircraft. Key measures are the number of hours flown and the number of landings, classified by the type of flying activity being undertaken. Statistics published in this report are compiled from the results of the annual General Aviation Activity Survey.

## Data sources for the Australian Aircraft Activity 2021 Publication

Survey questionnaires were despatched to owners or operators of all aircraft listed on the Australian Civil Aircraft Register. Responses were received for 73.6 per cent of aircraft in scope of the Survey. For aircraft where a response was not received, careful estimates were substituted, based on the average of responses by similar aircraft.

Not all aircraft in Australia are listed on the Australian Civil Aircraft Register. Owners of ultralight aircraft, gliders, weight shift aircraft and gyrocopters may instead be registered with their respective associations.

Statistics for aircraft registered to RA-Aus were provided directly by RA-Aus prior to 2020. BITRE has included these aircraft in the General Aviation Activity Survey since 2020, increasing the overall number of aircraft in the overall survey by around 25 per cent. Responses were received for 50.8 per cent of aircraft registered to RA-Aus. For aircraft where a response was not received, careful estimates were substituted, based on the average of responses by similar aircraft. Due to the relatively low response rate, caution should be taken with these estimates.

Statistics for gliders, weight shift aircraft and gyrocopters have been supplied courtesy of the Gliding Federation of Australia, the Hang Gliding Federation of Australia and the Australian Sport Rotorcraft Association.

BITRE statistical surveys are conducted under the authority of Air Navigation Regulation 2016 Part 2. This instrument is made under the *Air Navigation Act 1920*. The survey is compulsory, with penalties for non-compliance. BITRE wishes to thank aircraft owners and operators for their assistance with these statistical collections.

### Please note

Landings include touch-and-go landings and alighting on water.

Location statistics provided in this report refer to the location where the aircraft is most frequently based. For some operations, this may be a significant distance away from where aircraft activity may occur.

Aircraft make is generally the manufacturer. However in cases where there have been changes to the company's name, structure or ownership with little change to the line of aircraft produced, common names (or the most recent name) may be used or retained.

Where figures have been rounded, differences may occur between the sums of component items and totals.



## Symbols and other usages

na	Not applicable.
r	Revised.
-	Greater than zero but less than 50.
..	Not available for confidentiality or other reasons.

## Abbreviations

ASRA	Australian Sport Rotorcraft Association
BITRE	Bureau of Infrastructure and Transport Research Economics
CASA	Civil Aviation Safety Authority
C of A	Certificate of Airworthiness
GA	General Aviation
GFA	Gliding Federation of Australia
HGFA	Hang Gliding Federation of Australia
RA-Aus	Recreational Aviation Australia
RPT	Regular Public Transport

# Survey Form



**Australian Government**

**Department of Infrastructure, Transport, Regional Development and Communications**

Bureau of Infrastructure and Transport Research Economics

## General Aviation Activity Survey

Year ended 31 December 2021

This information is collected under the authority of Air Navigation Regulation 2016, Part 2 which provides penalties for non-compliance. This survey has been approved by the Australian Government Statistical Clearing House (Approval Number 00560—11).

**Please return the completed form by 31 March 2022.**

For all aircraft operated in the year ending 31 December 2021, please provide aircraft registrations, postcode of aircraft base, and number of hours flown and landings. Flying activity performed entirely outside Australia or its Territories should not be recorded.

Name:	Username:
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		Aircraft Registration (a)					
		Postcode of Aircraft Base (b)					
			Hours	Landings	Hours	Landings	Hours
Commercial Air Transport	Scheduled	International					
		Domestic					
		Freight only					
	Non-Scheduled	Passenger transport charters					
		Air ambulance					
		Freight only					
		Other commercial air transport					
General Aviation	Aerial Work	Agricultural spreading / spraying					
		Agricultural mustering					
		Agriculture - other					
		Construction - sling loads					
		Construction - other					
		Photography					
		Pipeline or powerline surveying					
		Other surveying					
		Observation and Patrol					
		Search and Rescue					
		Policing					
		Firefighting					
		Advertising					
		Other aerial work					
	Sport & pleasure flying	Own business travel					
		Instructional flying - commercial					
		Instructional flying - non-commercial					
		Glider towing					
		Parachute dropping					
		Aerobatics					
		Joyflights / sightseeing charters					
	Other flying	Pleasure and personal transport					
		Community service flights					
		Other sport and pleasure flying					
		Test flights					
		Ferry flights					
		Other Flights					

Additional comments:

Email:

Phone:

Date:

- (a) Aircraft Registration: Pre-printed registrations are based on information supplied by the Civil Aviation Safety Authority. Please add any additional aircraft you operated in 2021 that are not listed. If insufficient room please photocopy form and attach additional sheets.
- (b) Aircraft Base: Please indicate the postcode of the aerodrome or landing area at which the aircraft was most frequently based during 2021. For balloon operations, indicate the postcode of the general area from which most flying was conducted.

## DEFINITIONS

Flying hours should be recorded on the basis of the types of flying in which the aircraft was engaged, as defined below. Total time (including taxi time) is preferred, but airborne time or tacho time is acceptable if total time is not readily available.

Careful estimates are acceptable where exact figures are not readily available. *If your aircraft was inactive for all of 2021, please provide a 'Nil flying' response by entering '0' in the Hours and Landings fields, as this is required for producing accurate estimates of activity.*

### Commercial Air Transport

#### Scheduled

*International*  
*Domestic RPT*  
*Freight only*

Scheduled operations of international airlines operating into/out of Australia.  
Scheduled operations of domestic airlines operating within Australia.  
Scheduled operations carrying freight only.

#### Non Scheduled

*Passenger transport charters*

*Air Ambulance*

*Freight only*

*Other commercial air transport*

Flying involving the carriage of passengers by the aircraft operator or his/her employees for hire or reward (but excluding scheduled airline operations).  
Operations as an aerial ambulance for the transport of ill or injured persons (excluding Angel flights).  
Flying involving the carriage of cargo by the aircraft operator or his/her employees for hire or reward (but excluding scheduled airline operations).  
Includes on-demand charter and all other commercial air transport not classified elsewhere.

### General Aviation

#### Aerial Work

*Agricultural spreading / spraying*

*Agricultural mustering*

*Other agriculture*

*Construction – sling loads*

*Construction – other*

*Photography*

*Pipeline or powerline surveying*

*Other Surveying*

*Observation and patrol*

*Search and rescue*

*Policing*

*Fire fighting*

*Advertising*

*Other Aerial work*

Flying involving the spreading/spraying of chemicals, seeds, and fertilisers. This includes flights to and from the spread / spray area.  
Aerial stock mustering involving the direct use of aircraft for the movement of livestock.  
Other agricultural activity including aerial culling and baiting.  
Flying using sling loads for construction purposes.  
Includes all flying for construction purposes, excluding sling loads.  
All aerial photographic work.  
Aerial inspection patrols along pipelines or powerlines.  
Flying involving the use of aircraft for surveying not classified elsewhere. Includes geophysical surveys.  
Flying involving the use of aircraft for aerial observations and patrol. Includes coastal surveillance.  
Includes any search missions, as well as evacuation or rescue work.  
Flying involving the use of aircraft in police operations, includes traffic control, ground support, high-speed car pursuits, observation, air patrol etc.  
Flying involving the use of aircraft to combat fires (e.g. spotting, water bombing etc.). This includes flights to and from the fire area.  
Includes skywriting and banner towing advertising.  
Includes aerial spotting (stock, fish, etc.), cloud seeding, etc.

#### Own-use business travel

Business flying not through a hire or reward arrangement.

<b>Instructional flying</b>	Flying involving training for the issue or renewal of a licence or rating, aircraft type endorsement or conversion training. Includes solo navigation exercises conducted as part of a course of applied flying training.
<b>Sport and pleasure flying</b>	
<i>Pleasure and personal transport</i>	Flying for private pleasure, or personal transport not associated with a business or profession.
<i>Community service flights</i>	Flights that are provided on a voluntary basis for public benefit. This includes non-emergency flights provided as part of an organised voluntary or charitable activity. This does not include flights where a pilot provides a flight to a friend or family member.
<i>Glider towing</i>	Includes the use of aircraft for glider towing.
<i>Parachute dropping</i>	Flying associated with the dropping of parachutists.
<i>Aerobatics</i>	Aerobatic flight involves manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.
<i>Joyflights / sightseeing charters</i>	Flying involving the carriage of passengers for joyflights or sightseeing purposes that take off and land at the same location.
<i>Other sport and pleasure flying</i>	Other sport and pleasure flying not classified elsewhere.
<b>Other flying</b>	
<i>Test</i>	Flying associated with the testing of an aircraft.
<i>Ferry</i>	Flying associated with an aircraft delivery or movement to a location for maintenance, hire or other planned use.
<i>Other flying</i>	Flying not classified elsewhere.

## DIFFICULTIES AND ENQUIRES

The aircraft and operator/owner details included on this form are provided to the Bureau by the Civil Aviation Safety Authority shortly before dispatch of the survey forms. Although the latest available information is used, there will inevitably be a number of short-term discrepancies involving recent changes of operator, ownership or address.

Should any discrepancies occur over the longer term, please advise your local CASA office.

If you have any questions relating to the survey, please contact Aviation Statistics Section on (02) 6274 6135, fax (02) 6274 7727 or email [avstats@infrastructure.gov.au](mailto:avstats@infrastructure.gov.au).

# Definitions

Advertising	Includes skywriting and banner towing advertising.
Aerobatics	Aerobatic flight involves manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.
Agricultural mustering	Aerial stock mustering involving the direct use of aircraft for the movement of livestock.
Agricultural spreading / spraying	Flying involving the spreading/spraying of chemicals, seeds, and fertilisers. This includes flights to and from the spread / spray area.
Air Ambulance	Operations as an aerial ambulance for the transport of ill or injured persons (excluding Angel flights).
Commercial Air Transport	An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.
Commercial Air Transport - Scheduled	Commercial Air Transport that operates flights according to schedules drawn up to cover several months or even years at a time (e.g. Domestic RPT).
Commercial Air Transport – Non-Scheduled	Commercial Air Transport that operates without fixed or published flying schedules (e.g. charter passenger flights).
Community service flights	Flights that are provided on a voluntary basis for public benefit. This includes non-emergency flights provided as part of an organised voluntary or charitable activity. This does not include flights where a pilot provides a flight to a friend or family member.
Construction – other	Includes all flying for construction purposes, excluding sling loads.
Construction – sling loads	Flying using sling loads for construction purposes.
Domestic RPT	Scheduled operations of domestic airlines operating within Australia.
Ferry	Flying associated with an aircraft delivery or movement to a location for maintenance, hire or other planned use.
Fire fighting	Flying involving the use of aircraft to combat fires (e.g. spotting, water bombing etc.). This includes flights to and from the fire area.
General Aviation	An aircraft operation other than a commercial air transport operation.
Glider towing	Includes the use of aircraft for glider towing.
Instructional flying	Flying involving training for the issue or renewal of a licence or rating, aircraft type endorsement or conversion training. Includes solo navigation exercises conducted as part of a course of applied flying training.
International	Scheduled operations of international airlines operating into/out of Australia.

Joyflights / sightseeing charters	Flying involving the carriage of passengers for joyflights or sightseeing purposes that take off and land at the same location.
Non- scheduled Freight only	Flying involving the carriage of cargo by the aircraft operator or his/her employees for hire or reward (but excluding scheduled airline operations).
Observation and patrol	Flying involving the use of aircraft for aerial observations and patrol. Includes coastal surveillance.
Other Aerial work	Includes aerial spotting (stock, fish, etc.), cloud seeding, etc.
Other agriculture	Other agricultural activity including aerial culling and baiting.
Other commercial air transport	Includes on-demand charter and all other commercial air transport not classified elsewhere.
Other flying	Flying not classified elsewhere.
Other sport and pleasure flying	Other sport and pleasure flying not classified elsewhere.
Other Surveying	Flying involving the use of aircraft for surveying not classified elsewhere. Includes geophysical surveys.
Own-use business travel	Business flying not through a hire or reward arrangement.
Parachute dropping	Flying associated with the dropping of parachutists.
Passenger transport charters	Flying involving the carriage of passengers by the aircraft operator or his/her employees for hire or reward (but excluding scheduled airline operations).
Photography	All aerial photographic work.
Pipeline or powerline surveying	Aerial inspection patrols along pipelines or powerlines.
Pleasure and personal transport	Flying for private pleasure, or personal transport not associated with a business or profession.
Policing	Flying involving the use of aircraft in police operations, includes traffic control, ground support, high-speed car pursuits, observation, air patrol etc.
Scheduled Freight only	Scheduled operations carrying freight only.
Search and rescue	Includes any search missions, as well as evacuation or rescue work.
Test	Flying associated with the testing of an aircraft.