

General Aviation Manufacturers Association

# 2011

## **GENERAL AVIATION**

Statistical Databook &  
Industry Outlook



## GENERAL AVIATION IS ONE OF THE WORLD'S MOST IMPORTANT AND DYNAMIC INDUSTRIES.

As an integral and vital part of a magnificent system operated for the public benefit, general aviation provides services and fulfills needs that are more essential to the world economy than ever before. It is millions of people working to bring the advantages of the airplane to communities around the globe.

General aviation touches every aspect of our lives, our economy, and our future. It represents over one million jobs, billions of dollars in revenue, and the growth of thousands of cities, businesses, services, and manufacturing facilities around the world.

General aviation is defined as all aviation other than military and scheduled commercial airlines. Consider the scope of general aviation:

- Over **320,000** general aviation aircraft worldwide, ranging from two-seat training aircraft to intercontinental business jets, are flying today; over **223,000** of those aircraft are based in the United States.
- General aviation contributes more than **\$150 billion** to the U.S. economy annually and employs more than **1,265,000** people.
- In the U.S., general aviation aircraft fly almost **25 million** hours and carry **166 million** passengers annually.
- There are nearly **4,000** paved general aviation airports open to the public in the U.S. By contrast, scheduled airlines serve less than 500 airports.
- Over **two-thirds** of all the hours flown by general aviation aircraft are for business purposes.
- General aviation is the primary training ground for most commercial airline pilots.



The General Aviation Manufacturers Association (GAMA) represents over 70 of the world's leading manufacturers of general aviation airplanes and rotorcraft, engines, avionics, components and related services. GAMA's members also operate repair stations, fixed based operations, pilot and maintenance training facilities and they manage fleets of aircraft.

Headquartered in Washington, DC, with a European office in Brussels, Belgium, GAMA represents the interests of its members to government agencies throughout the world. These interests include legislation, safety regulations and standards, market access, development of aviation infrastructure, and aviation security.

GAMA also works with national and international industry groups and regulatory authorities to promote the interests of general aviation worldwide through a variety of means including the development of worldwide standards at the International Civil Aviation Organization (ICAO).

Through its public information and education programs, GAMA promotes better understanding of general aviation and the important role it plays in economic growth and in serving the transportation needs of communities, companies and individuals worldwide.

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## MARKET REVIEW

Many in the industry had anticipated 2011 to be the year when the general aviation manufacturing industry would begin to recover. However, the demand for business airplanes and services, especially in the established markets of Europe and North America, remained soft and customer confidence in making purchase decisions in these regions remained weak. This inactivity, nonetheless, was offset in part by demand from the emerging markets of China and Russia. While a full resurgence did not take place in 2011, the year finished with signs of recovery and reasons for optimism.

### SHIPMENTS AND BILLINGS

At year's end, worldwide shipments of general aviation airplanes totaled 1,865 units, as compared to 1,932 airplanes delivered in 2010 from the equivalent reporting companies. This represents a 3.5 percent decline. Shipments declined in all three industry segments from the previous year, but the declines reached single digits which indicate general aviation hitting the trough in the industry cycle with several companies showing flat or improved performance compared to 2010.

Worldwide general aviation billings (value of shipments) grew by 0.4 percent in 2011 to \$19.1 billion for equivalent reporting companies as compared to 2010. This increase in billings is the result of a shift in product mix for several segments.

Over the past several years, many general aviation manufacturers have turned their attention to the international marketplace. GAMA expects that demand from emerging markets will continue to lead the industry through the recovery. In 2011, 55.7 percent of total general aviation airplanes delivered went to North American customers while Europe and Asia-Pacific accounted for 14.9 percent of the aggregate deliveries each,

followed by Latin America at 9.4 percent and Middle East and Africa at 5.2 percent.

At the end of 2010, GAMA expanded its membership to include rotorcraft manufacturers. The association now represents every sector of the general aviation manufacturing industry. Shipment and billings data for rotorcraft will be reported on a quarterly basis starting with the first quarter of 2012.

### BUSINESS JETS

General aviation manufacturers delivered 681 business jets in 2011, as compared to 727 units in 2010, a 6.3 percent decline for equivalent reporting companies. Demand was much stronger in 2011 for large-cabin business jets, driven heavily by emerging markets, than it was for medium and light business jets. In addition, the relatively high number of airplanes on the used market over the past couple of years continued to have a dampening effect on business jet shipments this year.

In terms of total market share, North America remains the largest market for business jets, but deliveries are becoming more evenly distributed amongst geographic regions. North America accounted for 50.3 percent of the business jet deliveries

in 2011. Europe took 19.5 percent of shipments with Asia Pacific accounting for 13.5 percent of deliveries - the third strongest market and three times the market share compared to just five years ago. Latin America followed with 9.7 percent of business jet deliveries while Middle East and Africa accounted for 7.1 percent.

### TURBOPROPS

In 2011, 324 turboprop airplanes were delivered to customers around the world, a decrease of 2.4 percent from the previous year's figure of 332 for equivalent reporting companies.

Turboprop manufacturers have also spent considerable resources developing new markets outside of the United States. Although North America continues to lead the segment with 58.4 percent of units delivered, the Asia Pacific market is now second largest at 14.5 percent of shipments. Europe and Latin America are at 12.3 and 11.9 percent respectively with Middle East and Africa at 3.0 percent.

### PISTONS

The year started out in positive territory for piston-engine deliveries, but the segment

THE SHIPMENT AND BILLINGS FIGURES ON THESE TWO PAGES DO NOT INCLUDE HAWKER BEECHCRAFT CORPORATION'S 2010 OR 2011 FOURTH QUARTER NUMBERS. CHECK [WWW.GAMA.AERO](http://WWW.GAMA.AERO) AFTER APRIL 1, 2012 FOR AN UPDATED VERSION OF THIS DATABOOK.



ended down by 1.5 percent. Piston deliveries fell from 873 units shipped from equivalent reporting companies in 2010 to 860 during 2011. The piston segment fared best for unit deliveries among the three segments by which GAMA tracks the airplane manufacturing industry. This is due in part by deliveries to flight schools in emerging markets.

North American led the regional markets with 58.5 percent of the piston deliveries in 2011. The second largest market was Asia Pacific at 15.9 percent. Europe accounted for 12.6 percent with Latin America taking 8.5 percent of deliveries and Middle East and Africa at 4.6 percent.

*For more detailed shipment and billings data, please see Chapter 1 in this book.*

## **U.S. EXPORTS**

The general aviation industry remains one of the only sectors in U.S. manufacturing that contributes positively to the nation's balance of trade. In 2011, GAMA's U.S. members generated \$4.3 billion in new airplane export revenue. These exports accounted for 50.7 percent of the total value of U.S. manufactured general aviation airplanes.

## **FRACTIONAL OWNERSHIPS AND BUSINESS AIRCRAFT OPERATORS**

The fractional ownership segment has also been hit hard by the recession. Before the downturn, the percentage of total business jet deliveries going to fractional programs was on the order of 10 to 20 percent. Since 2009, deliveries of aircraft destined for these

types of operations have dwindled down to just several unit deliveries each year.

According to JETNET, LLC, the number of worldwide fractional share owners decreased in 2011 by 3.8 percent as compared to 2010. The number of worldwide fractional owners has declined 9.7 percent since its peak in 2008. The total number of aircraft in fractional ownership programs is correspondingly down. The fractional fleet decreased by 107 airplanes in 2011, a 10.4 percent contraction from the previous year.

The number of jet, turboprop and rotorcraft operators using their aircraft for business purposes increased in 2011 to 31,986 individual owners, a 2.5 percent increase over 2010. The worldwide business fleet also increased with 70,105 aircraft currently being operated by corporate flight departments around the world, a 3.0 percent increase.

## **USED MARKET**

The past few years have demonstrated just how direct of an impact the used general aviation airplane market has upon the health of the new airplane market. Though the inventory for used aircraft is slowly declining, the percentage of aircraft for sale is still high. This suppresses demand for new units and results in weaker pricing power.

According to JETNET, LLC the used business jet inventory in December 2011 was 13.8 percent of the active fleet. This is 1 percentage point lower than in December 2010. Although this trend continues to slowly move in the right direction, it is still

well above the historical average. In 2011, as compared to 2010, business jet sale transactions increased by 7.0 percent, but average asking price fell 13.8 percent and average days on the market increased by 20.

The turboprop fleet is also experiencing slow, positive movement. In December 2011, 9.6 percent of the active fleet was for sale, down 1.0 percentage point from the same time in 2010. Sale transactions for turboprops increased 13.4 percent and time on the market decreased by 6 days. However, the average asking price fell by 3.5 percent.

The inventory of turbine helicopters on the market stood at 6.6 percent at the end of 2011. This is down only 0.4 percentage points compared to 2010. Piston helicopters experienced the same kind of movement. 6.1 percent of the piston helicopter fleet is for sale, a 0.9 percentage point decrease from the previous year. Sale transactions for turbine and piston helicopters both declined by double-digits, 11.9 percent and 17.7 percent respectively, as compared to 2010. The two sectors split in regards to days on the market, down 1.9 percent to 60 days for turbine helicopters, but up 9.3 percent to 24 days for piston helicopters.

## GAMA AGENDA

GAMA's focus is on safeguarding the growth and vitality of general aviation around the world. The specific strategies for 2012 are designed to support a dynamic and sustainable global general aviation manufacturing industry whose purpose is to link nations and their communities, facilitate business and create jobs.



The foundation of GAMA's organizational strength is its members. We actively coordinate with our board of industry executives as well as other industry leaders on key aviation policy initiatives worldwide. GAMA serves its membership by providing timely information and analysis about general aviation issues and by effectively representing the industry before regulators and policymakers globally. GAMA also communicates the economic contributions and societal benefits of general aviation to the media, government officials and the communities served.

### MAKING GA SAFER

GAMA supports safety-enhancing initiatives which are based on the data driven analysis of accidents and incidents. We promote risk-based, targeted interventions including dissemination of timely safety information and best practices as well as initiatives to improve pilot training. We work with government-level accident investigation entities and legislators to ensure that these bodies have the resources, regulations and legal structure required to conduct objective, timely, and thorough investigations. We will continue to advocate for policies that facilitate the appropriate use and protection of safety data.

## **CREATING GENERAL AVIATION JOBS AND ADVANCING ECONOMIES**

Because GA is an industry that creates jobs and prosperity, GAMA advocates for a regulatory environment that promotes economic growth and innovation in GA manufacturing. An important example is our work to protect the General Aviation Revitalization Act (GARA) in the United States and, where appropriate, to strengthen it.

GAMA encourages the enactment of and maintenance of tax provisions that stimulate investment such as bonus depreciation and tax credits for research and development (R&D). At the same time, we continue to oppose efforts that single out the general aviation industry with politically-motivated policy changes that hinder its growth and vitality.

GAMA will continue to oppose proposals by governments that unfairly increase the tax/fee burden on the industry. For example, GAMA vehemently opposes efforts that would alter the funding mechanism the general aviation community uses in the U.S. to support the aviation system. Proposals to change the current fuel tax mechanism would create tremendous economic impediments for users and manufacturers and detract from ongoing safety and environmental efforts. In Europe and elsewhere, governments increasingly target aviation as a new source of tax revenue. GAMA will oppose fee and tax regimes that unfairly reduce the capital available to invest in improving the efficiency and sustainability of aviation operations.

## **CONTINUOUSLY IMPROVING AIRCRAFT CERTIFICATION PROCESSES**

GAMA strives to continuously improve aircraft certification processes and update airworthiness safety standards that will be recognized globally. In coordination with the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA), we work to enhance the effectiveness and efficiency of certification processes through robust compliance systems and international cooperation. GAMA advocates

with European institutions and the U.S. Administration and Congress for appropriate policies and sufficient resources to ensure safety oversight and timely certification activities. This includes the need for regulators to improve the effectiveness and efficiency of certification processes and leverage safety bilateral agreements to meet growing demand for certification services.

## **KEEPING GA SECURE**

GAMA works with the U.S. Transportation Security Administration (TSA) and Congress toward the implementation of a risk-based security program for large airplane operations and for an improved security regime for domestic and non-U.S. repair stations that is consistent with bilateral aviation agreements. In addition, GAMA calls on the TSA to formally initiate a review of the requirements for training non-U.S. pilots to ensure that it is based on risk analysis and does not place unwarranted burdens on the community. GAMA also advocates for practical mechanisms for general aviation access to airspace subject to security measures.

## **TRANSFORMING THE AIR TRANSPORTATION SYSTEM**

GAMA engages the U.S. Congress and Administration, the European Commission, EASA, EUROCONTROL, service providers, and the International Civil Aviation Organization (ICAO) to continue their focus on the safety, capacity and environmental benefits offered by air traffic control system modernization. GAMA strives for the harmonization of avionics equipage requirements to ensure upgrades are achieved in a cost-effective manner for air-to-ground data communications, navigation and surveillance. We also support operational and financial incentives for aircraft equipage to facilitate the modernization of ATC systems worldwide.

## **PRESERVING AND EXPANDING GA ACCESS**

GAMA vigorously opposes efforts to deny GA access to airports and airspace and promotes adherence to existing

legal processes to address such issues worldwide. We also work cooperatively with national authorities to expand domestic airspace for increased aviation operations in important emerging markets.

## **MINIMIZING GA'S ENVIRONMENTAL FOOTPRINT**

It is critical to further mitigate GA's carbon footprint while ensuring the industry's continued growth and sustainability. We strongly support ICAO as the forum for the development of global environmental standards for aviation. GAMA fights to ensure that as the international community and individual countries or regions develop or implement environmental standards for aviation, GA is treated in a fair and equitable manner that recognizes its economic value and unique characteristics.

GAMA is also working with the U.S. Congress, FAA and the Environmental Protection Agency (EPA) to establish the appropriate policies and programs necessary to facilitate a safe, timely and predictable transition to an unleaded aviation gasoline with minimum impact upon the existing fleet of piston aircraft.

## **EXPANDING GLOBAL MARKETS**

GAMA leverages its global membership to fight for the removal of trade and other barriers for the sale of GA products in markets worldwide. We strongly support U.S. and European Union (EU) technical cooperation mechanisms and public-private partnerships to enhance aviation safety and the harmonization of regulatory oversight based on ICAO standards in China and India. GAMA will work with other general aviation associations and authorities in the economies of the Asia Pacific Economic Cooperation (APEC) forum to develop a common framework to facilitate business aviation operations in that region.









# 01

General Aviation  
Shipments and Billings

# GAMA STATISTICS SUMMARY

THE TABLES/FIGURES ON THIS PAGE (14) DO NOT INCLUDE HAWKER BEECHCRAFT CORPORATION'S 2010 OR 2011 FOURTH QUARTER SHIPMENT AND BILLINGS NUMBERS. CHECK WWW.GAMA.AERO AFTER APRIL 1, 2012 FOR AN UPDATED VERSION OF THIS DATABOOK.

## AIRPLANE SHIPMENTS BY TYPE:

### MANUFACTURED WORLDWIDE

	2010	2011	CHANGE
Pistons	873	860	-1.5%
Turboprops	332	324	-2.4%
Business Jets	727	681	-6.3%
<b>Total Shipments</b>	<b>1,932</b>	<b>1,865</b>	<b>-3.5%</b>
<b>Total Billings</b>	<b>\$19.0B</b>	<b>\$19.1B</b>	<b>+0.4%</b>

## AIRPLANE SHIPMENTS BY TYPE:

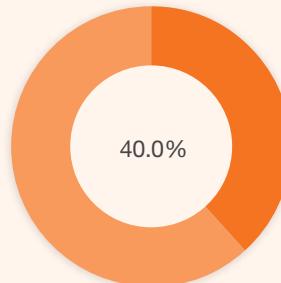
### MANUFACTURED IN U.S.

	2009	2011	CHANGE
Pistons	730	668	-8.5%
Turboprops	188	193	+2.7%
Business Jets	328	354	+7.9%
<b>Total Shipments</b>	<b>1,246</b>	<b>1,215</b>	<b>-2.5%</b>
<b>Total Billings</b>	<b>\$7.2B</b>	<b>\$8.4B</b>	<b>+17.1%</b>

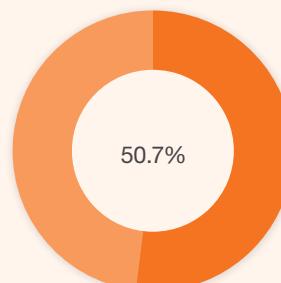
## U.S. EXPORTS

	2010	2011	CHANGE
Shipments	689	486	-29.5%
Billings	\$4.9B	\$4.3B	-12.5%

## U.S. EXPORTS 2011



Percentage of  
Total Shipments



Percentage of  
Total Billings

**NOTE:** Airplanes are considered to be manufactured in the U.S. if they are produced under an FAA production certificate

**NOTE:** Exports reflect U.S. manufactured airplanes shipped outside the U.S.

THE TABLES/FIGURES ON PAGES 15-27 DO NOT INCLUDE HAWKER BEECHCRAFT CORPORATION'S 2011 FOURTH QUARTER SHIPMENT AND BILLINGS NUMBERS. CHECK WWW.GAMA.AERO AFTER APRIL 1, 2012 FOR AN UPDATED VERSION OF THIS DATABOOK.

### 1.1 General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994-2011)

Year	Grand Total	Single-Engine	Multi-Engine	Total Piston	Turboprop	Business Jet	Total Turbine
1994	1,132	544	77	621	233	278	511
1995	1,251	605	61	666	285	300	585
1996	1,437	731	70	801	320	316	636
1997	1,840	1,043	80	1,123	279	438	717
1998	2,457	1,508	98	1,606	336	515	851
1999	2,808	1,689	112	1,801	340	667	1,007
2000	3,147	1,877	103	1,980	415	752	1,167
2001	2,998	1,645	147	1,792	422	784	1,206
2002	2,677	1,591	130	1,721	280	676	956
2003	2,686	1,825	71	1,896	272	518	790
2004	2,961	1,999	52	2,051	319	591	910
2005	3,590	2,326	139	2,465	375	750	1,125
2006	4,053	2,513	242	2,755	412	886	1,298
2007	4,276	2,417	258	2,675	465	1,136	1,601
2008	3,970	1,943	176	2,119	538	1,313	1,851
2009	2,279	893	70	963	446	870	1,316
2010	2,020	781	108	889	368	763	1,131
2011	1,865	739	121	860	324	681	1,005

Source: GAMA

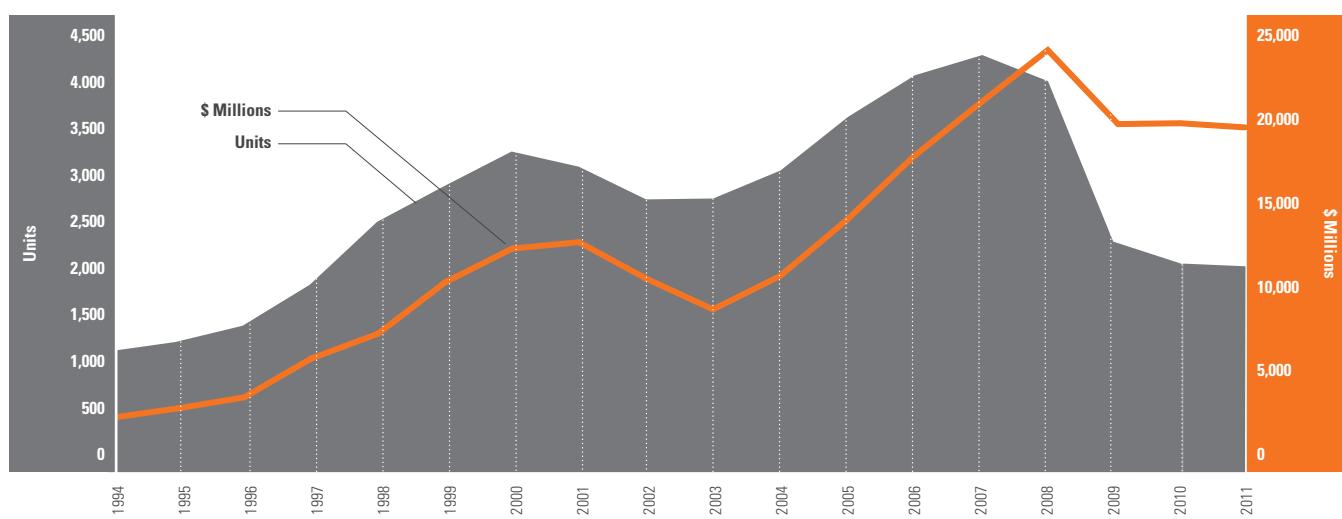
### 1.2 Estimated Billings (in Millions) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994-2011)

Year	Grand Total	Single Engine	Multi-Engine	Total Piston	Turboprop	Business Jet	Total Turbine
1994	3,749	*	*	111	714	2,924	3,638
1995	4,294	*	*	169	774	3,351	4,125
1996	4,936	*	*	191	864	3,881	4,745
1997	7,170	*	*	238	913	6,019	6,932
1998	8,604	*	*	377	1,011	7,216	8,227
1999	11,560	*	*	440	930	10,190	11,120
2000	13,496	*	*	512	1,323	11,661	12,984
2001	13,868	*	*	541	1,210	12,117	13,327
2002	11,778	*	*	483	868	10,427	11,295
2003	9,998	*	*	545	837	8,616	9,453
2004	11,918	*	*	692	997	10,229	11,226
2005	15,156	*	*	805	1,189	13,161	14,350
2006	18,815	*	*	857	1,389	16,569	17,958
2007	21,837	*	*	897	1,593	19,347	20,940
2008	24,772	*	*	945	1,953	21,874	23,827
2009	19,474	*	*	442	1,589	17,443	19,032
2010	19,715	*	*	415	1,300	18,000	19,300
2011	19,097	*	*	414	1,094	17,590	18,684

Some totals do not add up due to rounding.

Source: GAMA

Figure 1.1 General Aviation Airplane Shipments and Billings Worldwide (1994-2011)



**1.3 Delivery by Region (in Percent of Total) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (2007-2011)**

Year	Piston					Turboprop					Business Jet				
	North America	Europe	Asia Pacific	Latin America	Middle-East & Africa	North America	Europe	Asia Pacific	Latin America	Middle-East & Africa	North America	Europe	Asia Pacific	Latin America	Middle-East & Africa
2007	66.5	16.3	9.2	5.4	2.7	57.2	16.3	8.6	14.4	3.4	58.3	24.9	4.2	7.5	5.2
2008	68.1	15.2	7.5	7.3	2.0	57.3	21.9	6.0	7.4	7.4	53.8	25.9	4.7	9.4	6.3
2009	59.4	21.2	9.5	6.8	2.8	57.8	17.5	8.7	8.1	7.8	49.4	26.3	8.6	9.2	6.4
2010	53.4	18.6	13.7	8.8	5.5	43.2	15.2	16.8	14.7	10.1	42.1	22.8	11.8	14.3	9.0
2011	58.5	12.6	15.9	8.5	4.6	58.4	12.3	14.5	11.9	3.0	50.3	19.5	13.5	9.7	7.1

Source: GAMA

**1.4 Worldwide Business Jet Shipments by Manufacturer (1999-2011) (CONTINUED ON NEXT PAGE)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
<b>Airbus</b>	0	0	5	2	0	0	9	10	12	9	11	13	9	
Airbus Corporate Jet (all models)	-	-	5	2	0	0	9	10	12	9	11	-	-	
ACJ318 Elite	-	-	-	-	-	-	-	-	-	-	-	2	2	
ACJ319	-	-	-	-	-	-	-	-	-	-	-	8	6	
ACJ320 Prestige	-	-	-	-	-	-	-	-	-	-	-	3	1	
<b>Aircraft (form. Fairchild)</b>	0	0	4	4	9	9	1	0	0	0	0	0	0	
Envoy 3	-	-	4	4	9	9	1	-	-	-	-	-	-	
<b>Boeing Business Jet</b>	29	14	16	11	7	3	4	13	7	6	4	10	8	
Boeing Business Jet	29	14	11	9	4	2	3	12	7	3	3	4	8	
Boeing Business Jet 2	-	-	5	2	3	1	1	1	0	1	0	2	0	
Boeing Business Jet 3	-	-	-	-	-	-	-	-	-	2	1	4	0	
<b>Bombardier Business Aircraft</b>	173	207	179	101	70	129	188	213	224	245	173	150	182	
Learjet 31A	24	27	17	9	2	-	-	-	-	-	-	-	-	
Learjet 40/XR	-	-	-	-	-	17	21	26	57	48	33	16	24	
Learjet 45/XR	43	71	63	27	17	22	28	30	-	-	-	-	-	
Learjet 60	32	35	29	17	12	9	18	15	23	26	13	12	19	
Challenger 300	-	-	-	-	1	28	50	55	51	59	33	29	37	
Challenger 604 / 605	42	39	41	31	24	29	36	29	35	44	36	38	43	
Global 5000	-	-	-	-	-	4	17	18	46	-	-	-	-	
Global 6000 / Express	32	35	29	17	14	20	13	22	-	51	51	49	53	
CL 850/870/890	-	-	-	-	-	-	5	18	12	17	7	6	6	
<b>Cessna Aircraft Company</b>	216	252	306	305	196	181	247	307	388	466	289	178	183	
C510 Citation Mustang	-	-	-	-	-	-	-	1	45	101	125	73	43	
C525 Citation CJ1	59	56	61	30	22	20	14	-	-	-	-	-	-	
C525 Citation CJ1+	-	-	-	-	-	-	4	25	34	20	14	3	2	
C525A Citation CJ2	-	8	41	86	56	27	23	1	-	-	-	-	-	
C525A Citation CJ2+	-	-	-	-	-	-	-	36	44	56	21	17	15	
C525B Citation CJ3	-	-	-	-	-	6	48	72	78	88	40	20	22	
C525C Citation CJ4	-	-	-	-	-	-	-	-	-	-	-	19	48	
C550 Citation Bravo	36	54	48	41	31	25	21	18	-	-	-	-	-	
C560 Citation Ultra	32	-	-	-	-	-	-	-	-	-	-	-	-	
C560 Citation Encore	-	6	37	36	21	24	13	12	-	-	-	-	-	
C560 Citation Encore+	-	-	-	-	-	-	-	-	23	28	5	5	4	
C560 Citation Excel	39	79	85	81	48	23	-	-	-	-	-	-	-	
C560 Citation XLS	-	-	-	-	-	32	64	73	82	72	7	-	-	
C560 Citation XLS+	-	-	-	-	-	-	-	-	-	8	37	22	27	
C650 Citation VII	14	12	-	-	-	-	-	-	-	-	-	-	-	
C680 Citation Sovereign	-	-	-	-	-	9	46	57	65	77	33	16	19	
C750 Citation X	36	37	34	31	18	15	14	12	17	16	7	3	3	
<b>Dassault Falcon Jet</b>	69	73	75	66	49	63	51	61	70	72	77	95	63	
Falcon 50EX	11	18	13	10	8	5	5	5	2	1	-	-	-	
Falcon 900B	8	-	-	-	-	-	-	-	-	-	-	-	-	
Falcon 900C	-	6	6	4	3	3	1	-	-	-	-	-	-	
Falcon 900EX	16	23	21	17	6	1	-	-	-	-	-	-	-	
Falcon 900DX	-	-	-	-	-	2	4	10	4	1	3	-	-	
Falcon 900EX EASy	-	-	-	-	4	14	16	16	18	19	17	17	1	
Falcon 900LX	-	-	-	-	-	-	-	-	-	-	-	4	11	
Falcon 2000	34	26	35	35	12	11	6	6	1	-	-	-	-	
Falcon 2000DX	-	-	-	-	-	-	-	-	-	3	1	-	-	
Falcon 2000EX	-	-	-	-	16	10	-	-	-	-	-	-	-	
Falcon 2000EX EASy	-	-	-	-	-	19	21	30	33	24	3	-	-	
Falcon 2000LX	-	-	-	-	-	-	-	-	-	-	23	30	20	
Falcon 7X	-	-	-	-	-	-	-	-	6	21	32	41	31	

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#### 1.4 Worldwide Business Jet Shipments by Manufacturer (1999-2011) (CONTINUED FROM PREVIOUS PAGE)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Eclipse Aviation Corporation</b>	0	0	0	0	0	0	0	1	98	161	0	0	0
Eclipse 500	-	-	-	-	-	-	-	1	98	161	-	-	-
<b>Embraer</b>	0	0	0	8	13	13	20	27	36	38	122	145	99
Phenom 100	-	-	-	-	-	-	-	-	-	2	97	100	41
Phenom 300	-	-	-	-	-	-	-	-	-	-	1	26	42
Legacy 600 / 650	-	-	-	8	13	13	20	27	36	36	18	11	13
Lineage 1000 / E190 Head of State	-	-	-	-	-	-	-	-	-	-	5	5	3
Shuttles (ERJs and E-Jets)	-	-	-	-	-	-	-	-	-	-	1	3	0
<b>Emivest (prev. Sino Swearingen)</b>	0	0	0	0	0	0	0	1	1	0	2	0	0
SJ30-2	-	-	-	-	-	-	-	1	1	0	2	0	0
<b>Gulfstream Aerospace</b>	80	88	101	85	74	78	89	113	138	156	94	99	107
G100/150 (prev. IAI Astra)	9	11	5	9	24	-	-	-	-	-	-	-	-
G200 (prev. IAI Galaxy)	1	6	25	15	-	22	26	42	59	68	19	24	17
G300/350/400/450 (prev. GIV / GIVSP)	39	37	36	29	50	-	56	63	71	79	88	75	78
G500/G550 (prev. GV / GVSP)	31	34	35	32	-	-	-	-	-	-	-	-	-
G650	-	-	-	-	-	-	-	-	-	-	-	-	12
<b>Hawker Beechcraft Corporation</b>	100	118	98	94	100	115	141	140	162	160	98	73	30
Premier I/A	-	-	18	29	29	37	30	23	54	31	16	11	5
Hawker 400XP	45	51	25	19	24	28	53	53	41	35	11	12	1
Hawker 750	-	-	-	-	-	-	-	-	-	23	13	5	5
Hawker 800XP	55	67	55	46	47	50	58	8	-	-	-	-	1
Hawker 850XP	-	-	-	-	-	-	-	56	35	15	3	1	0
Hawker 900XP	-	-	-	-	-	-	-	-	32	50	35	28	11
Hawker 4000	-	-	-	-	-	-	-	-	-	6	20	16	7
<b>Total Number of Airplanes</b>	667	752	784	676	518	591	750	886	1,136	1,313	870	763	681
% Change	29.5%	12.7%	4.3%	-13.8%	-23.4%	14.1%	26.9%	18.1%	28.2%	15.6%	-33.7%	-12.3%	-10.7%
<b>Total Billings for Airplanes (\$M)</b>	10,190	11,661	12,117	10,427	8,616	10,229	13,161	16,555	19,347	21,874	17,443	18,000	17,590
% Change	41.2%	14.4%	3.9%	-13.9%	-17.4%	18.7%	28.7%	25.8%	16.9%	13.1%	-20.3%	3.2%	-2.3%

#### 1.5 Worldwide Turboprop Airplane Shipments by Manufacturer (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Cessna Aircraft Company</b>	87	92	75	80	57	64	86	67	79	101	97	95	93
C208 Caravan 675	20	16	19	14	8	13	11	8	11	12	12	8	10
C208B Grand Caravan	67	76	56	66	49	51	75	59	68	89	85	87	83
<b>Hawker Beechcraft Corporation</b>	177	205	130	82	81	102	114	140	157	172	119	90	55
Beechcraft King Air C90	41	46	41	21	18	27	35	52	46	66	44	28	16
Beechcraft King Air B200 / B250	55	59	46	26	38	39	37	42	58	54	37	24	14
Beechcraft King Air 350	45	46	32	24	24	36	42	46	53	52	38	38	25
Beechcraft 1900D	36	54	11	11	1	-	-	-	-	-	-	-	-
<b>Maule Air Incorporated</b>	1	0	3	0	1	2	0	0	0	1	0	0	0
M-7-420AC	0	0	0	0	0	0	0	0	0	1	0	0	0
MT-7-420	1	0	3	0	1	2	0	0	0	0	0	0	0
<b>Pacific Aerospace Corporation</b>	0	0	1	0	2	8	10	5	10	15	12	11	10
PAC 750XL	-	-	1	0	2	8	10	5	10	15	12	11	10
<b>Piaggio</b>	0	6	12	14	12	16	14	19	21	30	24	11	14
P180 Avanti	n/a	6	12	14	12	16	13	-	-	-	-	-	-
P180 Avanti II	-	-	-	-	-	1	19	21	30	24	11	14	-
<b>Pilatus</b>	55	69	70	45	61	70	80	90	98	100	105	84	69
PC-6 Porter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	3	5	5	6
PC-12	55	69	70	45	61	70	80	90	92	97	100	79	63
<b>Piper Aircraft, Inc.</b>	0	18	98	25	24	26	40	49	53	52	29	25	32
PA-46-500 TP Meridian	-	18	98	25	24	26	40	49	53	52	29	25	32
<b>Quest Aircraft Company</b>	0	0	0	0	0	0	0	0	1	7	24	14	13
Kodiak 100	-	-	-	-	-	-	-	-	1	7	24	14	13
<b>SOCATA</b>	20	25	33	34	34	31	31	42	46	60	36	38	38
TBM 700	20	25	33	34	34	31	31	-	-	-	-	-	-
TBM 850	-	-	-	-	-	-	-	42	46	60	36	38	38
<b>Total Number of Airplanes</b>	340	415	422	280	272	319	375	412	465	538	446	368	324
% Change	1.2%	22.1%	1.7%	-33.6%	-2.9%	17.3%	17.6%	9.9%	12.9%	15.7%	-17.1%	-17.5%	-12.0%
<b>Total Billings for Airplanes (\$M)</b>	930	1,323	1,210	868	837	997	1,189	1,389	1,593	1,953	1,589	1,300	1,094
% Change	-8.0%	42.2%	-8.5%	-28.3%	-3.5%	19.1%	19.3%	16.9%	14.6%	22.7%	-18.7%	-18.2%	-15.8%

**1.6 Worldwide Piston Engine Airplane Shipments by Manufacturer (1999-2011) (CONTINUED ON NEXT PAGE)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Adam Aircraft</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
A500	-	-	-	-	-	-	2	4	3	-	-	-	-
<b>Alpha Aviation</b>	<b>0</b>	<b>5</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>						
120T	-	-	-	-	-	-	-	-	2	-	-	-	-
160A	-	-	-	-	-	-	-	5	9	1	-	-	-
160Ai	-	-	-	-	-	-	-	-	2	0	-	-	-
<b>American Champion</b>	<b>91</b>	<b>96</b>	<b>56</b>	<b>53</b>	<b>63</b>	<b>94</b>	<b>89</b>	<b>60</b>	<b>70</b>	<b>54</b>	<b>26</b>	<b>37</b>	<b>29</b>
7EC Champ	-	-	-	-	-	-	-	1	21	7	1	0	3
7ECA Aurora	9	3	2	3	2	2	3	2	4	3	2	2	1
7GCAA Adventurer	19	23	8	12	9	12	12	6	6	2	1	2	0
7GCBC Citabria Explorer	31	22	21	13	12	24	26	16	8	8	4	4	6
8GCBC Scout	5	23	6	11	8	18	9	14	8	10	8	15	13
8KCAB Super Decathlon	27	25	19	14	32	38	39	21	23	24	10	14	6
<b>Aviat Aircraft</b>	<b>83</b>	<b>91</b>	<b>57</b>	<b>38</b>	<b>47</b>	<b>42</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
A-1A Husky	23	4	-	-	-	-	-	-	-	-	-	-	-
A-1B Husky	44	76	50	34	37	30	41	n/a	n/a	n/a	n/a	n/a	n/a
Husky Pup	-	-	-	-	3	3	1	n/a	n/a	n/a	n/a	n/a	n/a
S-2C Pitts	16	11	7	4	7	9	5	n/a	n/a	n/a	n/a	n/a	n/a
<b>Bellanca</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>									
Super Viking 17-30A	1	1	1	-	-	-	-	-	-	-	-	-	-
<b>Britten-Norman</b>	<b>1</b>	<b>2</b>	<b>0</b>										
BN-2B Islander	1	2	-	-	-	-	-	-	-	-	-	-	-
<b>Cessna Aircraft Company</b>	<b>899</b>	<b>912</b>	<b>821</b>	<b>559</b>	<b>588</b>	<b>654</b>	<b>822</b>	<b>865</b>	<b>807</b>	<b>733</b>	<b>354</b>	<b>239</b>	<b>245</b>
Cessna 172R Skyhawk	180	150	107	57	58	32	37	87	133	55	16	8	26
Cessna 172S Skyhawk	272	340	341	258	291	204	314	322	240	228	110	77	77
Cessna 182T Skylane	248	267	142	109	118	196	241	140	161	109	58	64	40
Cessna T182T Turbo Skylane	-	-	96	79	47	133	118	187	140	105	75	36	37
Cessna 206H Stationair	79	53	41	18	16	22	29	25	20	17	3	4	11
Cessna T206H Turbo Stationair	120	102	94	38	58	67	83	104	111	95	46	42	53
Cessna 350 Corvalis	-	-	-	-	-	-	-	-	1	14	5	1	0
Cessna 400 Corvalis TT	-	-	-	-	-	-	-	-	1	110	41	7	1
<b>Columbia Aircraft (prev. Lancair)</b>	<b>0</b>	<b>5</b>	<b>27</b>	<b>24</b>	<b>51</b>	<b>78</b>	<b>114</b>	<b>185</b>	<b>152</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Columbia 300	-	5	27	24	19	-	-	-	-	-	-	-	-
Columbia 350	-	-	-	-	32	28	25	39	34	-	-	-	-
Columbia 400	-	-	-	-	-	50	89	146	118	-	-	-	-
<b>Cirrus Design Corporation</b>	<b>9</b>	<b>95</b>	<b>183</b>	<b>397</b>	<b>469</b>	<b>553</b>	<b>600</b>	<b>721</b>	<b>710</b>	<b>549</b>	<b>266</b>	<b>264</b>	<b>255</b>
Cirrus SR-20	9	95	59	105	112	91	116	150	112	115	28	42	48
Cirrus SR-22	-	-	124	292	355	459	475	565	588	427	238	165	105
Cirrus SR-22T	-	-	-	-	-	-	-	-	-	-	-	57	102
Cirrus SR-V	-	-	-	-	2	3	9	6	10	7	-	-	-
<b>Commander Aircraft</b>	<b>13</b>	<b>20</b>	<b>11</b>	<b>7</b>	<b>0</b>								
Commander 114B	8	-	-	-	-	-	-	-	-	-	-	-	-
Commander 114TC	5	1	-	-	-	-	-	-	-	-	-	-	-
Commander 115	-	11	5	1	-	-	-	-	-	-	-	-	-
Commander 115TC	-	8	6	6	-	-	-	-	-	-	-	-	-
<b>Diamond Aircraft</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>155</b>	<b>228</b>	<b>261</b>	<b>329</b>	<b>438</b>	<b>471</b>	<b>308</b>	<b>129</b>	<b>120</b>	<b>182</b>
DA-20	n/a	n/a	n/a	70	75	58	54	55	58	69	14	31	40
DA-40	-	-	n/a	85	153	203	207	220	232	154	98	57	72
DA-42	-	-	-	-	-	68	163	181	85	41	32	70	-
<b>Embraer</b>	<b>17</b>	<b>17</b>	<b>1</b>	<b>0</b>									
EMB-201A Ipanema	-	-	-	-	-	-	-	-	-	-	-	-	-
EMB-202 Ipanema	12	15	1	-	-	-	-	-	-	-	-	-	-
EMB-720 Minuano	2	-	-	-	-	-	-	-	-	-	-	-	-
EMB-810 Seneca II	3	2	-	-	-	-	-	-	-	-	-	-	-
<b>GippsAero Pty Ltd.</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>20</b>	<b>22</b>	<b>20</b>	<b>17</b>	<b>19</b>	<b>11</b>	<b>14</b>	<b>10</b>
GA-8 Airvan	-	-	-	-	19	20	22	20	17	19	11	14	10

n/a – Manufacturer did not report

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**1.6 Worldwide Piston Engine Airplane Shipments by Manufacturer (1999-2011) (CONTINUED FROM PREVIOUS PAGE)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Hawker Beechcraft Corporation</b>	<b>144</b>	<b>153</b>	<b>136</b>	<b>83</b>	<b>82</b>	<b>93</b>	<b>99</b>	<b>118</b>	<b>111</b>	<b>103</b>	<b>56</b>	<b>51</b>	<b>28</b>
Beechcraft Bonanza A/G36	77	85	63	51	55	62	71	80	73	63	36	22	14
Beechcraft Bonanza B36TC	20	18	26	5	-	-	-	-	-	-	-	-	-
Beechcraft Baron B/G58	47	50	47	27	27	31	28	38	38	40	20	29	14
<b>Liberty Aerospace</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>29</b>	<b>38</b>	<b>33</b>	<b>13</b>	<b>14</b>	<b>3</b>
XL2	-	-	-	-	-	-	2	29	38	33	13	14	3
<b>Maule Air Incorporated</b>	<b>68</b>	<b>57</b>	<b>54</b>	<b>46</b>	<b>31</b>	<b>25</b>	<b>27</b>	<b>38</b>	<b>36</b>	<b>27</b>	<b>7</b>	<b>4</b>	<b>4</b>
M-4-180A, V	-	-	-	-	-	-	1	7	5	-	-	-	-
M-6-235	-	1	-	-	-	-	-	-	-	-	-	-	-
M-7-235, A, B, C	24	24	19	21	12	8	11	8	6	7	1	3	-
M-7-260, C	16	10	11	3	4	3	4	2	4	4	4	-	1
MT-7-235	4	5	16	12	7	1	2	9	2	6	2	-	-
MT-7-260	2	1	4	1	-	-	2	4	-	-	-	-	-
MX-7-160, C	1	-	-	-	-	-	-	-	-	-	-	-	-
MX-7-180, A, B, C, AC	3	3	1	4	6	5	3	4	6	4	-	1	1
MXT-7-160	-	-	-	-	-	-	-	-	-	-	-	-	-
MXT-7-180, A, AC	18	13	3	5	2	8	4	4	12	6	-	-	2
M-8-235	-	-	-	-	-	-	-	-	1	-	-	-	-
<b>Micco</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>						
SP-20	-	5	-	-	-	-	-	-	-	-	-	-	-
SP-26	-	1	10	-	-	-	-	-	-	-	-	-	-
<b>Mooney</b>	<b>97</b>	<b>100</b>	<b>29</b>	<b>10</b>	<b>36</b>	<b>37</b>	<b>85</b>	<b>75</b>	<b>79</b>	<b>65</b>	<b>19</b>	<b>2</b>	<b>0</b>
M20M Bravo	25	26	8	-	5	9	20	5	1	-	-	-	-
M20R Ovation	24	-	-	-	-	-	-	-	-	-	-	-	-
M20R Ovation 2	10	55	16	8	30	28	65	63	20	21	4	0	0
M20S Eagle	38	-	-	-	-	-	-	-	-	-	-	-	-
M20S Eagle 2	-	19	5	2	1	-	-	-	-	-	-	-	-
M20TN Acclaim	-	-	-	-	-	-	-	7	58	44	15	2	0
<b>Piper Aircraft, Inc.</b>	<b>341</b>	<b>377</b>	<b>343</b>	<b>265</b>	<b>205</b>	<b>163</b>	<b>193</b>	<b>189</b>	<b>168</b>	<b>216</b>	<b>61</b>	<b>135</b>	<b>104</b>
PA-28-161 Warrior III	20	43	32	29	31	18	37	19	27	23	8	23	15
PA-28-181 Archer III	107	102	88	38	49	19	16	29	16	7	1	21	2
PA-28R-201 Arrow IV	6	18	23	26	16	12	9	5	8	1	0	4	0
PA-32-301FT Piper 6X	-	-	-	-	10	24	18	10	12	0	-	-	-
PA-32-301XTC Piper 6XT	-	-	-	-	11	14	16	11	-	-	-	-	-
PA-32R-301 Saratoga II HP	28	28	22	5	9	9	8	10	-	-	-	-	-
PA-32-301T Saratoga II TC	52	70	68	45	28	31	37	37	39	12	0	0	0
PA-34-220T Seneca V	57	42	38	43	28	10	12	26	22	27	7	22	21
PA-44-180 Seminole	8	11	62	60	16	11	29	11	14	24	5	16	16
PA-46-350P Malibu Mirage	63	63	10	19	7	15	11	31	30	21	7	26	33
PA-46R-350T Matrix	-	-	-	-	-	-	-	-	-	101	33	23	17
<b>Quartz Mountain Aerospace</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>								
QMA 11E	-	-	-	-	-	-	-	-	-	11	-	-	-
<b>Symphony Aircraft (prev. OMF)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Symphony 160	-	-	-	-	19	1	10	5	-	-	-	-	-
<b>Pacific Aerospace Corporation</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
CT/4E Airtrainer	-	-	-	-	-	6	-	-	-	-	-	-	-
<b>SOCATA</b>	<b>37</b>	<b>48</b>	<b>63</b>	<b>70</b>	<b>40</b>	<b>5</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
TB-9 Tampico	0	2	2	3	2	0	1	-	-	-	-	-	-
TB-10	2	5	8	7	7	3	4	-	-	-	-	-	-
TB-20	31	26	33	44	19	0	1	-	-	-	-	-	-
TB-21	4	8	12	14	9	2	3	-	-	-	-	-	-
TB-200	0	7	8	2	3	0	0	-	-	-	-	-	-
<b>Tiger Aircraft</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>18</b>	<b>19</b>	<b>15</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
AG-5B Tiger	-	-	-	14	18	19	15	3	-	-	-	-	-
<b>Total Number of Airplanes</b>	1,801	1,980	1,792	1,721	1,896	2,051	2,465	2,755	2,675	2,119	963	889	860
% Change	12.1%	9.9%	-9.5%	-4.0%	10.2%	8.2%	20.2%	11.8%	-2.9%	-20.8%	-54.6%	-8.6%	-2.3%
<b>Total Billings for Airplanes</b>	440	512	541	483	545	692	805	857	897	945	442	415	414
% Change	16.6%	16.5%	5.5%	-10.7%	12.9%	27.0%	16.3%	6.5%	4.7%	5.3%	-53.1%	-7.7%	-0.4%





**1.7 U.S. Manufactured General Aviation Airplanes by Units Shipped, Number of Companies Reporting and Factory Net Billings (1946-2011)**

Year	Units Shipped	Companies Reporting	Factory Net Billings (\$Millions)
1946	35,000	-	\$111
1947	15,594	15	\$58
1948	7,037	12	\$32
1949	3,405	11	\$18
1950	3,386	13	\$19
1951	2,302	12	\$17
1952	3,058	8	\$27
1953	3,788	7	\$34
1954	3,071	7	\$43
1955	4,434	7	\$68
1956	6,738	8	\$104
1957	6,118	9	\$100
1958	6,414	10	\$102
1959	7,689	9	\$130
1960	7,588	8	\$151
1961	6,778	8	\$124
1962	6,697	7	\$137
1963	7,569	7	\$153
1964	9,336	8	\$199
1965	11,852	8	\$318
1966	15,768	10	\$445
1967	13,577	14	\$360
1968	13,698	14	\$426
1969	12,457	14	\$585
1970	7,292	13	\$337
1971	7,466	11	\$322
1972	9,774	12	\$558
1973	13,646	12	\$828
1974	14,166	12	\$909
1975	14,056	12	\$1,033
1976	15,451	12	\$1,226
1977	16,904	12	\$1,488
1978	17,811	12	\$1,781
1979	17,048	12	\$2,165
1980	11,877	12	\$2,486
1981	9,457	12	\$2,920
1982	4,266	11	\$2,000
1983	2,691	10	\$1,470
1984	2,431	9	\$1,681
1985	2,029	9	\$1,431
1986	1,495	9	\$1,262
1987	1,085	9	\$1,364
1988	1,212	11	\$1,923
1989	1,535	11	\$1,804
1990	1,144	14	\$2,008
1991	1,021	14	\$1,968
1992	941	16	\$1,840
1993	964	16	\$2,144
1994	928	13	\$2,357
1995	1,077	13	\$2,842
1996	1,115	13	\$3,048
1997	1,549	12	\$4,593
1998	2,200	12	\$5,761
1999	2,504	13	\$7,843
2000	2,816	15	\$8,558
2001	2,634	14	\$8,641
2002	2,207	12	\$7,719
2003	2,137	13	\$6,434
2004	2,355	13	\$6,816
2005	2,857	13	\$8,667
2006	3,147	16	\$10,367
2007	3,279	16	\$11,941
2008	3,079	15	\$13,348
2009	1,585	13	\$9,082
2010	1,334	12	\$7,875
2011	1,215	13	\$8,406

Source: GAMA

## 1.8 U.S. Manufactured General Aviation Airplane Shipments by Type (1959-2011)

Year	Grand Total	Single-Engine	Multi-Engine	Total Piston	Turboprop	Business Jet	Total Turbine
1959	7,689	6,849	840	7,689	-	-	-
1960	7,588	6,569	1,019	7,588	-	-	-
1961	6,756	5,995	761	6,756	-	-	-
1962	6,697	5,690	1,007	6,697	-	-	-
1963	7,569	6,248	1,321	7,569	-	-	-
1964	9,336	7,718	1,606	9,324	9	3	12
1965	11,852	9,873	1,780	11,653	87	112	199
1966	15,768	13,250	2,192	15,442	165	161	326
1967	13,577	11,557	1,773	13,330	149	98	247
1968	13,698	11,398	1,959	13,357	248	93	341
1969	12,457	10,054	2,078	12,132	214	111	325
1970	7,292	5,942	1,159	7,101	135	56	191
1971	7,466	6,287	1,043	7,330	89	47	136
1972	9,774	7,898	1,548	9,446	179	149	328
1973	13,646	10,780	2,413	13,193	247	206	453
1974	14,166	11,562	2,135	13,697	250	219	469
1975	14,056	11,439	2,116	13,555	305	196	501
1976	15,449	12,783	2,120	14,903	359	187	546
1977	16,907	14,057	2,195	16,252	428	227	655
1978	17,811	14,398	2,634	17,032	548	231	779
1979	17,050	13,286	2,843	16,129	639	282	921
1980	11,860	8,640	2,116	10,756	778	326	1,104
1981	9,457	6,608	1,542	8,150	918	389	1,307
1982	4,266	2,871	678	3,549	458	259	717
1983	2,691	1,811	417	2,228	321	142	463
1984	2,431	1,620	371	1,991	271	169	440
1985	2,029	1,370	193	1,563	321	145	466
1986	1,495	985	138	1,123	250	122	372
1987	1,085	613	87	700	263	122	385
1988	1,143	628	67	695	291	157	448
1989	1,535	1,023	87	1,110	268	157	425
1990	1,144	608	87	695	281	168	449
1991	1,021	564	49	613	222	186	408
1992	941	552	41	593	177	171	348
1993	964	516	39	555	211	198	409
1994	929	444	55	499	208	222	430
1995	1,077	515	61	576	255	246	501
1996	1,171	607	42	649	289	233	522
1997	1,562	898	86	984	236	342	578
1998	2,212	1,434	94	1,528	271	413	684
1999	2,530	1,634	114	1,748	265	517	782
2000	2,816	1,810	103	1,913	315	588	903
2001	2,631	1,581	147	1,728	303	600	903
2002	2,207	1,366	130	1,496	187	524	711
2003	2,137	1,519	71	1,590	163	384	547
2004	2,355	1,706	52	1,758	194	403	597
2005	2,857	2,024	71	2,095	240	522	762
2006	3,147	2,208	79	2,287	256	604	860
2007	3,279	2,097	77	2,174	290	815	1,105
2008	3,079	1,700	91	1,791	333	955	1,288
2009	1,585	770	32	802	269	514	783
2010	1,334	679	67	746	224	364	588
2011	1,215	617	51	668	193	354	547

R = Revised

This table was updated for turboprops in the 2008 data book for the years 1994 and 1996 through 2002 due to an entry error in earlier data books.

Source: GAMA

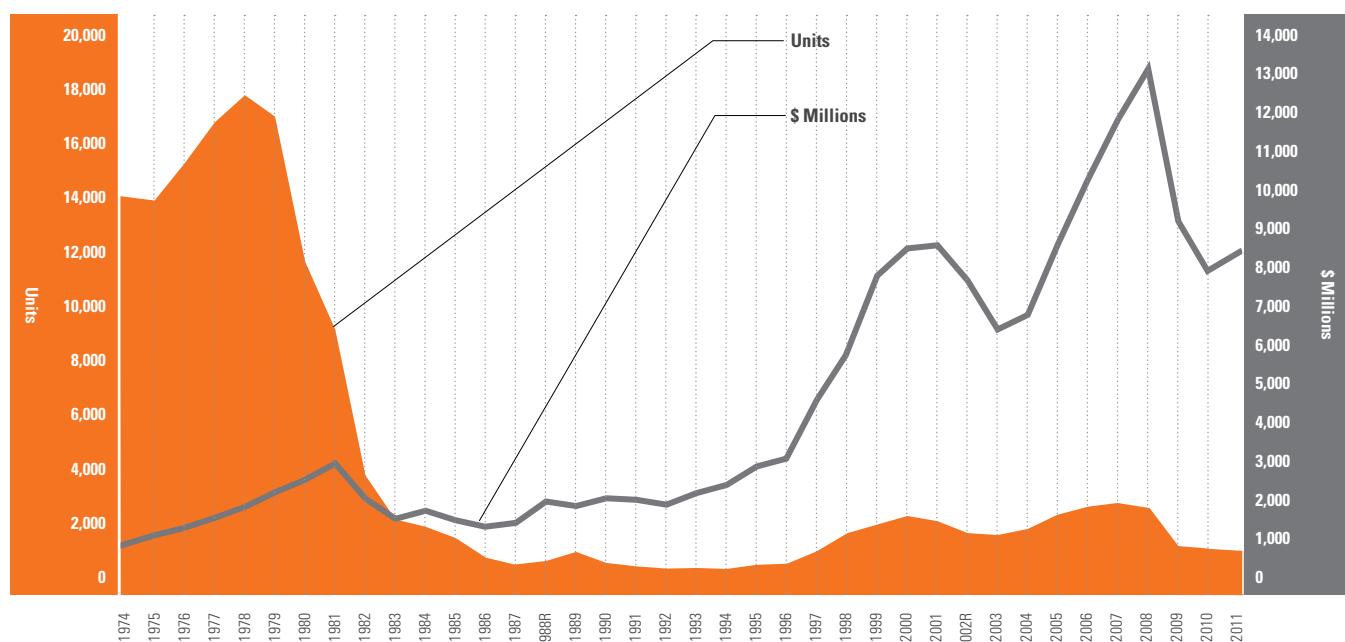
**1.9 U.S. Manufactured Estimated Billings (in Millions) for General Aviation Airplane Shipments by Type of Airplanes (1978-2011)**

Year	Grand Total	Single-Engine	Multi-Engine	Total Piston	Turboprop	Business Jet	Total Turbine
1978	<b>1,781</b>	516	493	<b>1,009</b>	394	378	<b>772</b>
1979	<b>2,165</b>	523	555	<b>1,078</b>	548	540	<b>1,088</b>
1980	<b>2,486</b>	391	403	<b>794</b>	875	816	<b>1,691</b>
1981	<b>2,920</b>	327	348	<b>675</b>	1,120	1,125	<b>2,245</b>
1982	<b>2,000</b>	200	220	<b>420</b>	590	990	<b>1,580</b>
1983	<b>1,470</b>	145	115	<b>260</b>	460	750	<b>1,210</b>
1984	<b>1,681</b>	147	133	<b>280</b>	436	966	<b>1,402</b>
1985	<b>1,431</b>	126	68	<b>194</b>	524	713	<b>1,237</b>
1986	<b>1,262</b>	80	43	<b>123</b>	430	709	<b>1,139</b>
1987	<b>1,364</b>	80	18	<b>98</b>	477	789	<b>1,266</b>
1988	<b>1,918</b>	66	12	<b>78</b>	596	1,242	<b>1,838</b>
1989	<b>1,804</b>	104	24	<b>128</b>	524	1,149	<b>1,673</b>
1990	<b>2,008</b>	68	24	<b>92</b>	644	1,272	<b>1,916</b>
1991	<b>1,968</b>	*	*	<b>93</b>	527	1,348	<b>1,875</b>
1992	<b>1,840</b>	*	*	<b>96</b>	460	1,284	<b>1,744</b>
1993	<b>2,144</b>	*	*	<b>76</b>	595	1,473	<b>2,068</b>
1994	<b>2,357</b>	*	*	<b>81</b>	595	1,681	<b>2,276</b>
1995	<b>2,842</b>	*	*	<b>123</b>	653	2,066	<b>2,719</b>
1996	<b>3,048</b>	*	*	<b>142</b>	715	2,191	<b>2,906</b>
1997	<b>4,580</b>	*	*	<b>200</b>	727	3,653	<b>4,380</b>
1998	<b>5,761</b>	*	*	<b>330</b>	763	4,668	<b>5,431</b>
1999	<b>7,843</b>	*	*	<b>385</b>	658	6,800	<b>7,458</b>
2000	<b>8,558</b>	*	*	<b>446</b>	934	7,178	<b>8,112</b>
2001	<b>8,641</b>	*	*	<b>471</b>	742	7,428	<b>8,170</b>
2002	<b>7,719</b>	*	*	<b>389</b>	487	6,843	<b>7,330</b>
2003	<b>6,434</b>	*	*	<b>440</b>	411	5,583	<b>5,994</b>
2004	<b>6,816</b>	*	*	<b>568</b>	555	5,693	<b>6,248</b>
2005	<b>8,667</b>	*	*	<b>712</b>	749	7,205	<b>7,954</b>
2006	<b>10,367</b>	*	*	<b>722</b>	853	8,792	<b>9,645</b>
2007	<b>11,941</b>	*	*	<b>712</b>	1,001	10,227	<b>11,228</b>
2008	<b>13,348</b>	*	*	<b>836</b>	1,172	11,340	<b>12,513</b>
2009	<b>9,082</b>	*	*	<b>389</b>	872	7,821	<b>8,693</b>
2010	<b>7,875</b>	*	*	<b>368</b>	724	6,782	<b>7,506</b>
2011	<b>8,406</b>	*	*	<b>341</b>	559	7,507	<b>8,066</b>

Some totals do not add up due to rounding.

Source: GAMA

**FIGURE 1.2 U.S. Manufactured General Aviation Airplane Units and Billings (1974-2011)**





## 1.10 U.S. Civil Airplane Imports Units and Dollar Value (in Millions) (2004-2010)

	2004		2005		2006		2007		2008		2009		2010	
	Units	Dollars												
Single-Engine	293	\$228.8	313	\$255.5	394	\$334.4	388	\$304.7	376	\$456.0	200	\$310.6	212	\$272.6
Multi-Engine Under 4,400 lbs	1	\$0.1	0	\$-	37	\$17.5	81	\$37.7	37	\$17.2	11	\$6.0	4	\$2.8
Multi-Engine 4,400-10,000 lbs	9	\$33.8	13	\$57.2	19	\$87.8	20	\$105.4	20	\$104.1	71	\$263.7	50	\$160.7
Multi-Engine-Turbojet/Turbofan 10,000-33,000 lbs.	237	\$4,275.0	184	\$3,367.0	189	\$3,496.0	219	\$3,998.3	188	\$3,489.2	82	\$1,684.3	86	\$1,657.4
Multi-Engine-Other (Including Turboshaft) 10,000-33,000 lbs.	4	\$63.8	2	\$6.2	6	\$50.7	4	\$69.5	-	-	3	\$72.8	5	\$97.1
<b>Total</b>	<b>544</b>	<b>\$4,601.5</b>	<b>512</b>	<b>\$3,679.8</b>	<b>645</b>	<b>\$3,986.3</b>	<b>712</b>	<b>\$4,515.7</b>	<b>621</b>	<b>\$4,066.4</b>	<b>367</b>	<b>\$2,337.4</b>	<b>357</b>	<b>\$2,190.8</b>

NNote: Department of Commerce data includes regional jets and regional turboprop airplanes in the 10,000 - 33,000 lbs category.

Source: Aerospace Industries Association from  
Department of Commerce Data

## 1.11 U.S. Manufactured General Aviation Airplane Exports (1978-2011)

Year	Units Exported	% of Total Production	Export Billings \$ (in Millions)	% of Total Billings
1978	3,612	20.3%	\$486.7	27.3%
1979	3,995	23.4%	\$600.9	27.8%
1980	3,555	29.9%	\$756.4	30.4%
1981	2,270	24.0%	\$749.0	25.7%
1982	1,162	27.2%	\$650.2	32.5%
1983	513	19.1%	\$316.5	21.5%
1984	334	13.7%	\$260.7	15.5%
1985	354	17.4%	\$230.0	16.1%
1986	441	29.5%	\$343.6	27.2%
1987	439	40.5%	\$469.3	34.4%
1988	425	37.2%	\$626.8	32.7%
1989	566	36.9%	\$587.0	32.5%
1990	458	40.0%	\$872.2	43.4%
1991	382	37.4%	\$807.0	41.0%
1992	353	39.0%	\$608.7	33.0%
1993	349	36.2%	\$856.8	40.0%
1994	277	29.8%	\$684.2	29.0%
1995	315	29.3%	\$815.9	28.7%
1996	345	30.5%	\$903.0	28.9%
1997	449	28.6%	\$1,504.6	32.2%
1998	535	24.1%	\$1,640.1	27.9%
1999	562	22.3%	\$2,503.8	31.6%
2000	569	20.2%	\$1,957.5	22.9%
2001	505	19.2%	\$2,380.6	27.5%
2002	372	16.8%	\$1,980.9	25.4%
2003	336	15.7%	\$1,218.2	18.9%
2004	333	14.1%	\$1,419.6	20.8%
2005	557	19.5%	\$2,585.9	29.8%
2006	891	28.3%	\$4,395.5	42.4%
2007	1,142	34.8%	\$4,587.0	38.4%
2008	1,161	37.7%	\$5,863.8	43.9%
2009	732	46.2%	\$4,612.7	50.8%
2010	689	51.6%	\$4,867.8	61.8%
2011	486	40.0%	\$4,259.7	50.7%

Source: GAMA

**1.12 U.S. Manufactured General Aviation Airplane Exports by Type (1978-2011)**

<b>Year</b>	<b>Single-Engine Piston</b>	<b>Multi-Engine Piston</b>	<b>Turboprop</b>	<b>Business Jet</b>
1978	2,712	652	166	82
1979	2,942	774	181	98
1980	2,565	635	245	110
1981	1,546	363	259	102
1982	718	227	135	82
1983	298	119	66	30
1984	199	79	25	31
1985	208	69	49	28
1986	272	69	68	32
1987	252	60	78	49
1988	220	52	91	62
1989	385	46	78	57
1990	224	57	86	91
1991	204	25	74	79
1992	196	16	90	51
1993	149	23	109	68
1994	84	42	84	67
1995	130	30	85	70
1996	126	24	135	60
1997	199	25	126	99
1998	268	30	131	106
1999	237	23	42	158
2000	285	24	112	148
2001	175	42	118	170
2002	135	23	79	136
2003	168	22	52	94
2004	181	9	55	88
2005	301	18	66	172
2006	535	30	74	252
2007	665	33	131	313
2008	556	40	175	410
2009	341	15	121	255
2010	299	45	151	194
2011	244	44	98	100

Source: GAMA





# 02

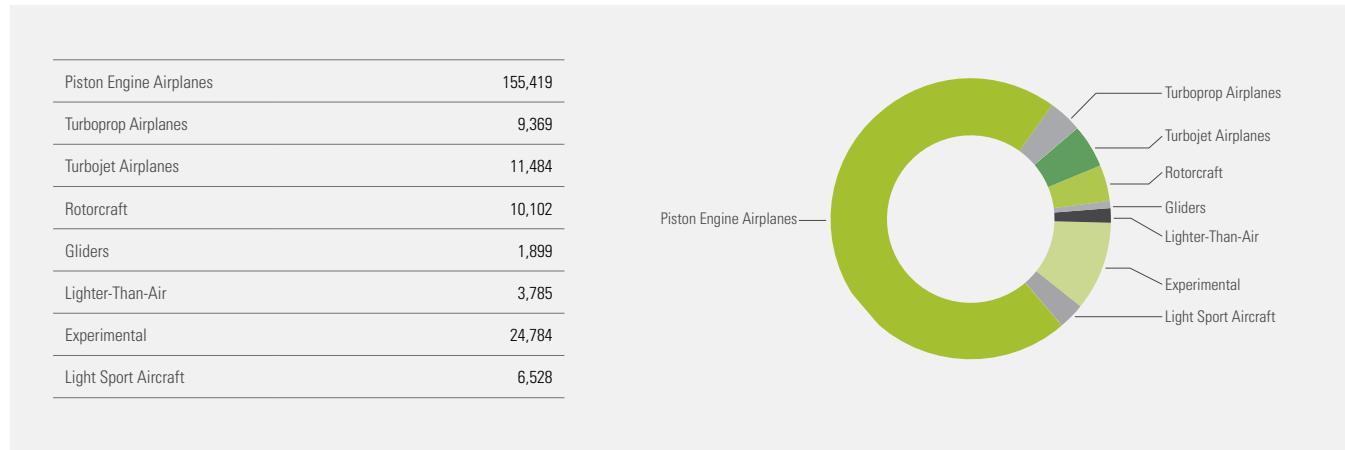
General Aviation  
Fleet and Flight Activity

## 2.1 Active U.S. General Aviation and On-Demand FAR Part 135 Number of Aircraft by Primary Use by Aircraft Type (2010)

Aircraft Type	Total Active	General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
		Personal	Business	Corporate	Instructional	Aerial Apps	Aerial Obs	Aerial Other	External Load	Other Work	Sight See	Aero Med	Other	Air Taxi	Air Tours	Air Med
<b>Total All Aircraft</b>	<b>223,370</b>	<b>150,854</b>	<b>21,666</b>	<b>10,405</b>	<b>15,404</b>	<b>3,313</b>	<b>5,929</b>	<b>659</b>	<b>223</b>	<b>806</b>	<b>1,457</b>	<b>232</b>	<b>4,311</b>	<b>6,547</b>	<b>466</b>	<b>1,099</b>
% Std. Error	1.5	2.2	1.8	1.0	1.8	1.3	1.3	1.0	0.9	1.3	1.7	1.0	1.2	0.7	0.7	0.7
<b>Piston Total</b>	<b>155,419</b>	<b>114,059</b>	<b>17,572</b>	<b>1,300</b>	<b>12,508</b>	<b>1,439</b>	<b>3,017</b>	<b>165</b>	-	<b>427</b>	<b>308</b>	<b>73</b>	<b>2,129</b>	<b>2,295</b>	<b>73</b>	<b>53</b>
One Engine	139,519	106,125	13,630	407	11,611	1,397	2,593	43	-	403	291	22	1,683	1,244	67	3
Two Engine	15,900	7,934	3,942	893	897	43	423	122	-	24	17	51	447	1,051	6	49
<b>Turboprop Total</b>	<b>9,369</b>	<b>1,771</b>	<b>1,716</b>	<b>1,980</b>	<b>124</b>	<b>1,266</b>	<b>582</b>	<b>123</b>	-	<b>178</b>	<b>3</b>	<b>29</b>	<b>195</b>	<b>1,188</b>	<b>39</b>	<b>175</b>
One Engine Total	4,214	970	795	350	58	1,251	38	25	-	70	-	4	81	512	29	30
Two Engine Total	5,155	801	920	1,630	66	15	544	97	-	108	3	25	115	677	10	144
<b>Turbojet Total</b>	<b>11,484</b>	<b>1,185</b>	<b>1,189</b>	<b>6,400</b>	<b>53</b>	<b>3</b>	<b>15</b>	<b>5</b>	-	<b>13</b>	-	<b>19</b>	<b>879</b>	<b>1,555</b>	-	<b>168</b>
<b>Rotorcraft Total</b>	<b>10,102</b>	<b>1,520</b>	<b>486</b>	<b>565</b>	<b>1,324</b>	<b>519</b>	<b>2,124</b>	<b>361</b>	<b>223</b>	<b>73</b>	<b>181</b>	<b>89</b>	<b>216</b>	<b>1,431</b>	<b>313</b>	<b>677</b>
Piston Total	3,588	1,193	314	16	1,215	195	327	41	9	15	117	4	57	56	31	-
Turbine Total	6,514	327	173	550	109	325	1,798	319	213	58	65	85	159	1,375	282	677
- One Engine Turbine	5,012	302	146	186	89	322	1,690	266	143	55	65	24	92	1,040	270	322
- Two Engine Turbine	1,502	25	27	364	20	3	108	53	71	2	-	60	67	335	11	355
<b>Gliders</b>	<b>1,899</b>	<b>1,621</b>	-	-	<b>211</b>	-	<b>3</b>	-	-	-	<b>30</b>	-	<b>34</b>	-	-	-
<b>Lighter-Than-Air</b>	<b>3,785</b>	<b>2,914</b>	<b>73</b>	-	<b>118</b>	-	-	-	-	<b>78</b>	<b>520</b>	-	<b>43</b>	-	<b>39</b>	-
<b>Experimental Total</b>	<b>24,784</b>	<b>22,047</b>	<b>575</b>	<b>160</b>	<b>445</b>	<b>85</b>	<b>164</b>	<b>5</b>	-	<b>30</b>	<b>415</b>	<b>22</b>	<b>731</b>	<b>77</b>	<b>3</b>	<b>26</b>
Amateur Built	21,270	19,604	411	3	388	-	111	-	-	5	400	-	349	-	-	-
Exhibition	2,029	1,716	40	-	32	4	7	-	-	9	12	-	207	-	-	-
Other	1,485	726	125	157	25	80	46	5	-	16	2	22	175	77	3	26
<b>Light Sport Total</b>	<b>6,528</b>	<b>5,738</b>	<b>55</b>	-	<b>621</b>	-	<b>24</b>	-	-	<b>7</b>	-	-	<b>83</b>	-	-	-
Exp. Light Sport	4,878	4,464	7	-	368	-	17	-	-	7	-	-	16	-	-	-
Special Light Sport	1,650	1,274	49	-	253	-	7	-	-	-	-	-	67	-	-	-

Source: FAA Survey

**FIGURE 2.1** Active U.S. General Aviation and On-Demand FAR Part 135 Aircraft by Type (2010)

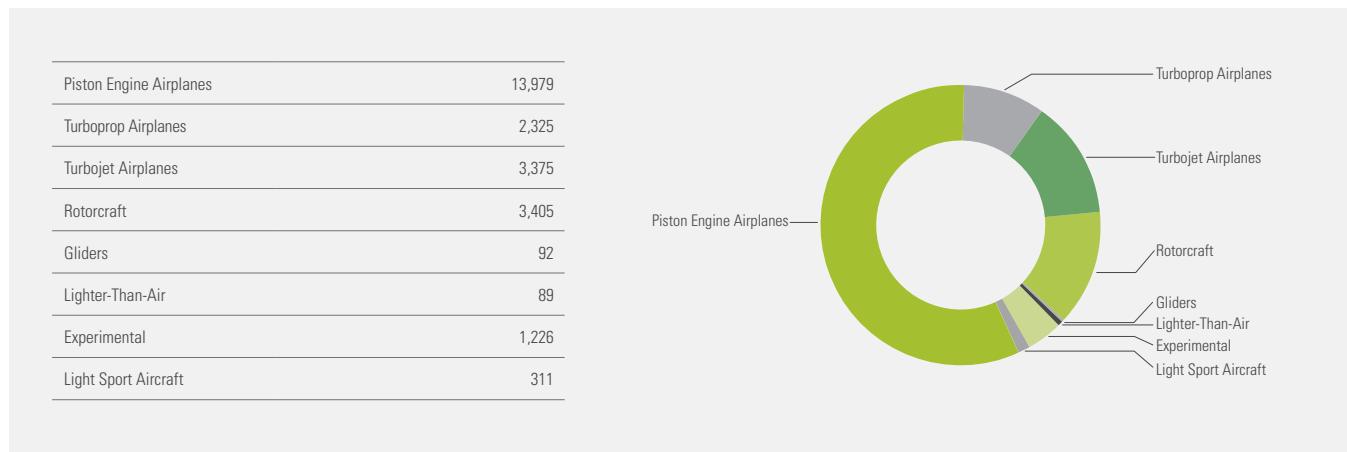


## 2.2 Active U.S. General Aviation and On-Demand FAR Part 135 Total Hours Flown (in Thousands) by Use by Aircraft Type (2010)

Aircraft Type	Total Active	General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
		Personal	Business	Corporate	Instructional	Aerial Apps	Aerial Obs	Aerial Other	External Load	Other Work	Sight See	Aero Med	Other	Air Taxi	Air Tours	Air Med
<b>Total All Aircraft</b>	<b>24,802</b>	<b>8,006</b>	<b>2,387</b>	<b>2,696</b>	<b>3,885</b>	<b>1,070</b>	<b>1,667</b>	<b>328</b>	<b>144</b>	<b>259</b>	<b>173</b>	<b>187</b>	<b>886</b>	<b>2,201</b>	<b>297</b>	<b>615</b>
% Std. Error	1.1	1.3	2.6	3.7	3.4	6.6	5.3	16.5	22.2	15.3	10.2	9.9	4.3	4.5	16.4	9.8
<b>Piston Total</b>	<b>13,979</b>	<b>6,248</b>	<b>1,804</b>	<b>251</b>	<b>3,135</b>	<b>398</b>	<b>831</b>	<b>103</b>	<b>0</b>	<b>147</b>	<b>47</b>	<b>113</b>	<b>276</b>	<b>576</b>	<b>24</b>	<b>27</b>
One Engine	12,161	5,760	1,447	73	2,868	383	716	92	0	114	45	105	222	307	22	7
Two Engine	1,818	487	357	178	267	15	115	11	0	33	2	9	54	269	2	19
<b>Turboprop Total</b>	<b>2,325</b>	<b>201</b>	<b>249</b>	<b>429</b>	<b>56</b>	<b>506</b>	<b>114</b>	<b>128</b>	<b>0</b>	<b>65</b>	<b>1</b>	<b>15</b>	<b>77</b>	<b>381</b>	<b>14</b>	<b>89</b>
One Engine Total	1,086	102	111	81	13	475	12	6	0	14	0	7	35	197	12	20
Two Engine Total	1,238	99	138	348	43	30	102	122	-	51	1	8	42	183	2	69
<b>Turbojet Total</b>	<b>3,375</b>	<b>223</b>	<b>214</b>	<b>1,836</b>	<b>16</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>349</b>	<b>649</b>	<b>1</b>	<b>68</b>
<b>Rotorcraft Total</b>	<b>3,405</b>	<b>125</b>	<b>62</b>	<b>133</b>	<b>529</b>	<b>133</b>	<b>676</b>	<b>94</b>	<b>143</b>	<b>30</b>	<b>60</b>	<b>42</b>	<b>122</b>	<b>575</b>	<b>255</b>	<b>426</b>
Piston Total	794	89	37	2	443	31	96	4	2	2	39	0	25	13	12	-
Turbine Total	2,611	36	25	131	86	102	580	90	141	28	21	41	98	563	244	426
- One Engine Turbine	2,011	33	20	57	69	101	541	67	106	25	21	22	53	424	236	237
- Two Engine Turbine	600	4	5	74	17	1	39	24	35	4	0	19	45	138	7	189
<b>Gliders Total</b>	<b>92</b>	<b>66</b>	<b>-</b>	<b>-</b>	<b>19</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Lighter-Than-Air Total</b>	<b>89</b>	<b>53</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>27</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>
<b>Experimental Total</b>	<b>1,226</b>	<b>854</b>	<b>52</b>	<b>46</b>	<b>71</b>	<b>32</b>	<b>40</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>34</b>	<b>9</b>	<b>51</b>	<b>21</b>	<b>1</b>	<b>7</b>
Amateur Built	911	746	38	0	63	2	9	2	0	3	32	0	17	-	-	-
Exhibition	98	68	2	-	2	1	13	-	-	1	1	-	9	-	-	-
Other	217	41	12	46	6	29	18	0	0	2	0	9	25	21	1	7
<b>Light Sport Total</b>	<b>311</b>	<b>238</b>	<b>4</b>	<b>-</b>	<b>57</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>
Exp. Light Sport	173	159	0	-	8	0	2	0	-	1	1	-	1	-	-	-
Special Light Sport	138	79	4	-	49	-	1	-	-	-	0	-	6	-	-	-

Source: FAA Survey

**FIGURE 2.2** Active U.S. General Aviation and On-Demand FAR Part 135 Total Hours Flown (in Thousands) by Aircraft Type (2010)



## 2.3 Active U.S. General Aviation and On-Demand FAR Part 135 Aircraft by Type (1981-2010)

Calendar Year	Total Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light Sport Aircraft		
		Piston	Turboprop	Turbojet	Piston	Turbine			Total	Experimental <sup>1</sup>	Special <sup>2</sup>
1981	<b>213,219</b>	193,367	4,659	3,170	3,250	3,724	5,049	*	*	*	*
1982	<b>209,778</b>	189,195	5,186	3,996	2,419	3,749	5,233	*	*	*	*
1983	<b>213,292</b>	191,479	5,453	3,898	2,541	3,998	5,923	*	*	*	*
1984	<b>220,941</b>	197,442	5,808	4,320	2,936	4,160	6,275	*	*	*	*
1985	<b>210,853</b>	188,191	5,607	4,374	2,877	3,541	6,263	*	*	*	*
1986	<b>219,325</b>	195,647	5,244	4,481	2,921	4,022	7,010	*	*	*	*
1987	<b>217,202</b>	194,454	5,274	4,358	2,813	3,520	6,783	*	*	*	*
1988	<b>210,246</b>	187,536	5,259	4,188	2,584	3,822	6,857	*	*	*	*
1989	<b>219,738</b>	193,815	6,324	4,402	3,244	4,232	7,721	*	*	*	*
1990	<b>212,230</b>	187,774	5,652	4,375	3,459	3,938	7,032	*	*	*	*
1991	<b>196,874</b>	173,518	4,941	4,126	2,390	3,848	8,051	*	*	*	*
1992	<b>185,650</b>	162,881	4,786	4,004	2,348	3,631	8,000	*	*	*	*
1993	<b>177,120</b>	149,156	4,116	3,663	1,846	2,875	5,037	10,426	*	*	*
1994	<b>172,935</b>	142,152	4,092	3,914	1,627	3,101	5,906	12,144	*	*	*
1995	<b>188,089</b>	152,788	4,995	4,559	1,863	3,967	4,741	15,176	*	*	*
1996	<b>191,129</b>	153,551	5,716	4,424	2,507	4,063	4,244	16,625	*	*	*
1997	<b>192,414</b>	156,056	5,619	5,178	2,259	4,527	4,092	14,680	*	*	*
1998	<b>204,710</b>	162,963	6,174	6,066	2,545	4,881	5,580	16,502	*	*	*
1999	<b>219,464</b>	171,923	5,679	7,120	2,564	4,884	6,765	20,528	*	*	*
2000	<b>217,534</b>	170,513	5,762	7,001	2,680	4,470	6,701	20,407	*	*	*
2001	<b>211,446</b>	163,314	6,596	7,787	2,292	4,491	6,545	20,421	*	*	*
2002R	<b>211,244</b>	161,087	6,841	8,355	2,351	4,297	6,377	21,936	*	*	*
2003	<b>209,708</b>	160,938	7,689	7,997	2,123	4,403	6,008	20,550	*	*	*
2004	<b>219,426</b>	165,189	8,379	9,298	2,315	5,506	5,939	22,800	*	*	*
2005	<b>224,352</b>	167,608	7,942	9,823	3,039	5,689	6,454	23,627	170	*	*
2006	<b>221,942</b>	163,743	8,063	10,379	3,264	5,895	6,278	23,047	1,273	*	*
2007	<b>231,607</b>	166,907	9,514	10,385	2,769	6,798	5,940	23,228	6,066	*	*
2008	<b>228,663</b>	163,013	8,906	11,042	3,498	6,378	5,652	23,364	6,811	*	*
2009	<b>223,877</b>	157,123	9,055	11,268	3,499	6,485	5,480	24,419	6,547	5,077	1,470
2010	<b>223,370</b>	155,419	9,369	11,484	3,588	6,514	5,684	24,784	6,528	4,878	1,650

R = Revised

1. Experimental Light Sport are aircraft with experimental airworthiness certificates and Light Sport aircraft for which airworthiness certificates are not final. Many of the Experimental Light Sport aircraft have previously been operated as ultralights but do not meet the FAR Part 103 definition of an ultralight vehicle. These aircraft were required to be transitioned to E-LSA category no later than 2010.

2. The FAA started publishing data for Special Light Sport aircraft separately in 2009.

Source: FAA Survey

The Federal Aviation Administration's (FAA) annual general aviation survey categorizes the uses of general aviation aircraft as follows: personal and recreational; corporate and executive (flying with a paid, professional crew); and business transportation (individual use of an airplane for business without a paid, professional crew). In addition, the following forms of business operations are included in general aviation operations: instructional (operations under the supervision of a flight instructor including solo flight); sight-seeing (commercial sight-seeing operations under FAR Part 91); and on-demand FAR Part 135 operations including air taxi (charter), air tours, and air medical operations.

## 2.4 Active U.S. General Aviation and On-Demand FAR Part 135 Estimated Hours Flown (in Thousands) by Type (1980-2010)

Calendar Year	Total Hours	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light Sport Aircraft		
		Piston	Turboprop	Turbojet	Piston	Turbine			Total	Experimental <sup>1</sup>	Special <sup>2</sup>
1980	<b>41,016</b>	34,747	2,240	1,332	736	1,603	359	*	*	*	*
1981	<b>40,704</b>	34,086	2,155	1,387	930	1,754	391	*	*	*	*
1982	<b>36,457</b>	29,950	2,168	1,611	579	1,771	379	*	*	*	*
1983	<b>35,249</b>	28,911	2,173	1,473	572	1,700	420	*	*	*	*
1984	<b>36,119</b>	29,194	2,506	1,566	592	1,903	358	*	*	*	*
1985	<b>31,456</b>	25,666	1,921	1,498	521	1,468	382	*	*	*	*
1986	<b>31,782</b>	24,805	2,661	1,527	742	1,682	364	*	*	*	*
1987	<b>30,883</b>	24,969	2,010	1,411	602	1,506	384	*	*	*	*
1988	<b>31,114</b>	24,291	2,195	1,554	533	1,974	568	*	*	*	*
1989	<b>32,332</b>	24,907	2,892	1,527	692	1,918	396	*	*	*	*
1990	<b>32,096</b>	25,832	2,319	1,396	716	1,493	341	*	*	*	*
1991	<b>29,862</b>	23,919	1,628	1,071	549	2,214	483	*	*	*	*
1992	<b>26,747</b>	21,417	1,582	1,076	423	1,842	407	*	*	*	*
1993	<b>24,455</b>	19,321	1,192	1,212	391	1,308	338	785	*	*	*
1994	<b>24,092</b>	18,823	1,142	1,238	369	1,408	388	724	*	*	*
1995	<b>26,612</b>	20,251	1,490	1,455	337	1,624	261	1,194	*	*	*
1996	<b>26,909</b>	20,091	1,768	1,543	591	1,531	227	1,158	*	*	*
1997	<b>27,713</b>	20,744	1,655	1,713	344	1,740	192	1,327	*	*	*
1998	<b>28,100</b>	20,402	1,765	2,226	430	1,912	295	1,071	*	*	*
1999	<b>31,231</b>	22,529	1,797	2,721	552	2,077	309	1,246	*	*	*
2000	<b>29,960</b>	21,493	1,986	2,648	530	1,661	362	1,280	*	*	*
2001	<b>27,017</b>	19,194	1,773	2,654	474	1,479	287	1,157	*	*	*
2002R	<b>27,040</b>	18,891	1,850	2,745	454	1,422	333	1,345	*	*	*
2003	<b>27,329</b>	19,013	1,922	2,704	448	1,687	263	1,292	*	*	*
2004	<b>28,126</b>	18,142	2,161	3,718	514	2,020	249	1,322	*	*	*
2005	<b>26,982</b>	16,434	2,106	3,771	617	2,439	267	1,339	9	*	*
2006	<b>27,705</b>	16,525	2,162	4,077	918	2,528	211	1,218	66	*	*
2007	<b>27,852</b>	16,257	2,661	3,938	704	2,541	215	1,275	260	*	*
2008	<b>26,009</b>	15,074	2,457	3,600	751	2,470	209	1,155	293	*	*
2009	<b>23,763</b>	13,634	2,215	3,161	755	2,248	178	1,286	286	171	115
2010	<b>24,802</b>	13,979	2,325	3,375	794	2,611	181	1,226	311	173	138

R = Revised

Key changes to survey methodology by year:

2003: aircraft operating in commuter operations were excluded.

2004: the survey coverage was expanded for turbine airplanes and rotorcraft accounting for part of the increase in hours.

2007: the estimate of light sport aircraft increased significantly due to mandatory process for registration.

1. Experimental Light Sport are aircraft with experimental airworthiness certificates and Light Sport aircraft for which airworthiness certificates are not final. Many of the Experimental Light Sport aircraft have previously been operated as ultralights but do not meet the FAR Part 103 definition of an ultralight vehicle. These aircraft were required to be transitioned to E-LSA category no later than 2010.

2. The FAA started publishing data for Special Light Sport aircraft separately in 2009.

Source: FAA Survey

## 2.5 Active U.S. General Aviation and On-Demand FAR Part 135 Hours Flown (in Thousands) per Aircraft by Year (1998-2010)

Calendar Year	Total Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light Sport Aircraft	
		Piston	Turboprop	Turbojet	Piston	Turbine			Total	Special <sup>1</sup>
1998	<b>137</b>	125	286	367	169	392	53	65	-	-
1999	<b>145</b>	133	319	385	217	448	47	61	-	-
2000	<b>142</b>	130	353	393	198	398	56	64	-	-
2001	<b>138</b>	128	290	341	254	347	50	59	-	-
2002	<b>128</b>	117	270	329	193	331	53	61	-	-
2003	<b>130</b>	118	250	338	211	383	44	63	-	-
2004	<b>128</b>	110	258	400	222	367	42	58	-	-
2005	<b>120</b>	98	265	384	203	429	41	57	55	-
2006	<b>125</b>	101	268	393	281	429	34	53	52	-
2007	<b>120</b>	97	280	379	254	374	36	55	43	-
2008	<b>114</b>	93	276	326	215	387	37	50	43	-
2009	<b>106</b>	87	245	281	216	347	32	53	44	78
2010	<b>111</b>	90	248	294	221	401	32	50	48	84

Columns may not add due to rounding and estimation procedures

Source: FAA Survey

1. The FAA started publishing data for Special Light Sport aircraft separately in 2009.

## 2.6 Active General Aviation and On-Demand FAR Part 135 Aircraft by U.S. State or Territory (2001-2010)

State or Territory	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Alabama	3,012	3,423	3,249	3,712	3,495	4,477	3,719	3,549	3,145	5,095
Alaskan	5,714	5,718	5,489	6,207	6,217	6,201	6,111	6,076	6,017	6,113
Arizona	6,707	5,506	5,072	6,607	5,867	6,438	7,636	5,767	6,896	7,531
Arkansas	2,730	2,807	3,286	2,621	2,467	2,382	2,575	2,291	2,661	3,028
California	22,708	24,448	23,501	23,700	25,337	23,854	23,813	25,292	24,811	22,830
Colorado	5,104	5,625	5,343	5,222	5,755	5,623	5,441	6,268	4,973	5,483
Connecticut	1,573	1,597	1,790	1,780	2,120	2,090	2,296	2,228	1,868	1,566
Delaware	1,938	1,957	2,256	2,365	2,596	2,409	2,494	1,830	2,261	1,934
District of Columbia	39	11	30	37	48	34	41	29	80	17
Florida	14,773	13,188	14,236	15,385	15,776	14,226	16,341	16,143	16,804	16,126
Georgia	5,324	6,098	4,981	5,490	5,381	5,762	4,758	6,674	5,970	5,843
Hawaii	282	356	414	331	481	619	531	530	499	741
Idaho	2,504	2,548	2,156	2,193	2,664	2,786	2,747	2,816	3,282	2,860
Illinois	6,041	5,976	5,895	6,942	6,283	5,841	6,872	5,480	6,786	6,112
Indiana	4,143	3,574	4,550	4,173	3,987	3,909	4,862	3,764	4,008	3,151
Iowa	3,156	2,742	2,899	3,035	2,943	2,798	2,982	3,361	2,935	2,629
Kansas	3,361	3,122	3,141	3,750	3,330	3,393	3,044	3,814	3,805	3,547
Kentucky	2,191	2,109	2,165	1,870	1,778	1,497	2,073	1,726	1,780	2,082
Louisiana	2,355	2,488	2,886	2,721	3,030	2,393	2,857	3,136	2,970	3,512
Maine	1,207	913	1,210	1,238	1,370	948	1,463	1,284	1,230	1,347
Maryland	2,784	2,367	3,214	2,550	3,123	2,317	2,699	2,671	2,971	2,774
Massachusetts	2,600	2,843	2,580	2,985	2,636	2,655	2,738	2,417	2,539	2,426
Michigan	6,234	7,375	5,694	6,975	6,274	6,229	6,443	8,668	6,068	6,112
Minnesota	5,928	5,229	4,241	4,861	5,728	5,414	5,086	4,840	5,187	4,690
Mississippi	1,893	1,811	2,198	2,563	2,068	2,159	1,939	1,298	2,237	2,543
Missouri	3,503	3,893	3,919	3,902	3,774	4,312	4,616	3,596	4,119	3,847
Montana	2,180	2,324	2,274	2,200	2,408	2,911	3,110	2,152	2,576	2,536
Nebraska	1,919	1,729	1,734	1,936	2,109	2,057	2,127	2,074	2,314	2,076
Nevada	2,563	2,427	2,034	3,033	2,990	3,374	3,512	3,093	2,022	2,030
New Hampshire	1,753	1,455	1,472	1,566	1,282	1,320	1,425	1,624	1,361	1,316
New Jersey	3,917	3,647	3,341	3,466	3,944	3,683	3,369	4,076	3,232	2,954
New Mexico	2,486	2,272	2,784	3,088	3,076	3,375	4,221	3,519	2,663	3,411
New York	5,570	6,180	6,205	5,959	5,437	5,829	5,661	6,074	5,577	6,457
North Carolina	5,272	5,727	5,830	5,602	6,298	6,106	5,917	5,376	6,004	5,883
North Dakota	1,434	1,224	1,322	812	1,350	1,533	1,236	1,276	1,101	1,366
Ohio	7,325	6,719	7,391	6,458	6,630	7,108	6,189	6,200	6,329	5,823
Oklahoma	3,421	3,693	3,770	4,347	3,910	4,734	4,021	4,911	4,229	4,794
Oregon	4,955	5,219	4,669	5,384	5,029	4,800	6,029	4,614	5,234	5,200
Pennsylvania	5,825	5,806	5,590	6,281	6,041	5,865	5,881	7,410	6,539	6,012
Puerto Rico	373	368	367	319	372	182	348	620	319	397
Rhode Island	232	294	384	383	523	320	243	299	234	352
South Carolina	2,152	2,422	2,505	2,271	2,690	2,236	3,214	2,845	2,425	2,634
South Dakota	971	1,331	960	1,156	1,281	1,293	1,143	1,554	1,843	1,024
Tennessee	3,610	3,912	3,909	3,906	4,148	4,156	4,286	4,438	3,820	3,993
Texas	17,564	16,915	16,889	17,999	18,338	18,415	20,235	18,117	19,416	17,595
Utah	1,653	1,805	1,316	1,923	1,936	1,856	2,057	2,583	1,859	2,298
Vermont	546	698	565	726	514	636	431	628	553	603
Virginia	4,451	4,524	4,472	4,455	4,590	4,809	4,642	5,605	3,961	5,178
Washington	6,666	6,043	6,143	6,623	7,154	7,042	7,722	7,198	6,604	7,585
West Virginia	1,071	1,196	862	888	1,208	957	1,101	1,247	1,160	1,292
Wisconsin	4,667	4,639	4,944	4,226	5,244	5,290	5,872	3,911	5,134	5,694
Wyoming	1,030	906	1,501	1,166	1,125	1,241	1,287	1,493	1,299	836
Other U.S. Territories	42	*	*	*	*	*	*	154	182	166
<b>Grand Total</b>	<b>211,446</b>	<b>211,244</b>	<b>209,708</b>	<b>219,426</b>	<b>224,352</b>	<b>221,943</b>	<b>231,607</b>	<b>228,663</b>	<b>223,877</b>	<b>223,370</b>

Columns may not add up due to rounding procedures.  
Beginning in 2007, the survey asked the state in which the aircraft was "primarily flown" rather than where the aircraft was "based."  
Estimates by state and region may vary from previous years. State of registration is assigned if state primarily flown was not answered or cannot be coded.

Source: FAA Survey

**2.7 Active General Aviation and On-Demand FAR Part 135 Est. Hours Flown (in Thousands) by U.S. State or Territory (2001-2010)**

State or Territory	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Alabama	465	466	389	529	350	437	372	546	299	643
Alaskan	717	656	605	753	815	734	783	701	688	681
Arizona	1,075	665	746	833	666	1,141	807	579	809	1,135
Arkansas	471	457	479	408	330	298	338	354	346	354
California	2,934	3,243	3,160	3,031	2,871	3,201	2,540	2,651	2,555	2,350
Colorado	632	754	644	608	702	596	663	626	525	716
Connecticut	203	211	250	506	380	401	380	445	355	201
Delaware	359	265	288	367	418	413	410	313	221	220
District of Columbia	9	1	14	10	18	14	15	88	4	4
Florida	2,256	1,880	2,183	2,043	2,137	1,662	2,198	2,382	2,047	1,839
Georgia	959	804	551	661	646	679	568	709	805	618
Hawaii	68	138	166	118	121	249	106	93	148	179
Idaho	265	314	401	207	227	324	319	234	300	204
Illinois	740	637	673	844	634	698	723	423	655	574
Indiana	484	369	544	438	346	363	358	294	412	255
Iowa	433	309	271	373	327	262	298	294	281	232
Kansas	466	413	308	580	396	421	442	397	366	344
Kentucky	274	250	308	186	192	131	186	131	137	157
Louisiana	463	510	472	482	658	651	756	777	913	862
Maine	143	116	108	106	153	101	128	112	81	86
Maryland	396	291	326	330	319	288	309	248	176	235
Massachusetts	366	341	273	315	261	275	317	310	224	244
Michigan	667	756	845	705	561	611	512	572	477	471
Minnesota	649	585	479	445	512	535	552	453	413	415
Mississippi	313	408	315	477	325	334	381	233	296	354
Missouri	474	444	447	508	381	489	376	272	412	303
Montana	459	259	240	254	258	260	349	239	188	164
Nebraska	369	199	188	220	238	308	255	201	197	183
Nevada	334	298	259	372	413	625	573	377	276	343
New Hampshire	196	230	222	183	136	139	107	150	123	148
New Jersey	543	405	452	393	420	476	315	742	331	315
New Mexico	291	317	446	352	384	334	461	276	190	246
New York	700	816	650	747	561	528	600	549	463	787
North Carolina	645	826	696	724	118	744	928	644	637	723
North Dakota	230	258	198	83	118	183	171	348	106	217
Ohio	869	780	1,084	824	999	788	741	700	608	631
Oklahoma	481	478	453	961	788	1,018	841	794	809	910
Oregon	620	753	551	716	611	558	725	431	559	784
Pennsylvania	887	681	973	754	654	620	624	851	652	662
Puerto Rico	104	39	54	86	36	57	54	78	50	154
Rhode Island	27	40	42	34	64	31	43	20	19	36
South Carolina	345	298	272	213	324	311	260	300	189	205
South Dakota	114	176	124	136	151	135	151	112	176	96
Tennessee	599	482	663	521	465	516	524	559	315	362
Texas	2,377	2,055	2,418	2,360	2,257	2,276	2,450	2,071	2,042	2,039
Utah	273	279	225	287	363	340	386	443	262	325
Vermont	40	73	65	67	48	71	39	35	35	49
Virginia	532	499	498	605	48	538	703	691	376	645
Washington	1,037	729	623	712	719	769	949	691	614	602
West Virginia	106	102	64	115	107	65	82	95	97	80
Wisconsin	501	583	490	420	606	482	487	297	376	318
Wyoming	151	93	179	113	103	158	167	144	118	88
Other U.S. Territories	23	9	13	11	37	10	32	15	10	-
<b>Grand Total</b>	<b>29,134</b>	<b>27,040</b>	<b>27,329</b>	<b>28,126</b>	<b>26,982</b>	<b>27,705</b>	<b>27,854</b>	<b>26,009</b>	<b>23,763</b>	<b>24,802</b>

Columns may not add up due to rounding procedures

Source: FAA Survey

## 2.8 Total Fuel Consumed and Average Fuel Consumption Rate by Aircraft Type Based on FAA's Survey (2010)

Fuel Type	Fixed Wing			Rotorcraft		Other Aircraft	Experimental	Light Sport	Total All Aircraft
	Piston	Turboprop	Turbojet	Piston	Turbine				
<b>Jet Fuel</b>									
Avg. Rate (GPH)	38.4	87.4	332.8	23.9	48.0	-	153.5	-	<b>179.5</b>
Estimated Fuel Use (Thousand Gal.)	6,178.7	197,100.4	1,084,594.3	196.5	120,835.6	-	42,607.6	-	<b>1,451,513.0</b>
% Standard Error	12.2	4.3	1.5	17.0	2.4	-	12.0	-	<b>1.4</b>
<b>100 Low-Lead</b>									
Avg. Rate (GPH)	13.3	20.6	34.3	13.4	16.4	4.3	10.5	5.1	<b>13.0</b>
Estimated Fuel Use (Thousand Gal.)	180,139.5	1,943.7	13.5	9,495.4	16.7	112.8	8,332.4	428.1	<b>200,482.0</b>
% Standard Error	2.1	6.1	14.2	2.8	17.2	51.0	3.3	3.8	<b>1.7</b>
<b>100 Octane</b>									
Avg. Rate (GPH)	12.4	23.3	-	12.7	1.9	2.0	11.8	4.7	<b>12.4</b>
Estimated Fuel Use (Thousand Gal.)	8,934.4	73.2	-	395.1	0.2	0.6	364.0	26.1	<b>9,793.6</b>
% Standard Error	6.9	17.2	-	13.9	-	16.6	15.8	17.8	<b>5.7</b>
<b>Automotive Gasoline</b>									
Avg. Rate (GPH)	8.4	-	-	12.5	-	4.0	6.3	4.6	<b>6.7</b>
Estimated Fuel Use (Thousand Gal.)	3,972.9	-	-	6.2	-	11.2	1,562.2	1,036.2	<b>6,588.7</b>
% Standard Error	15.3	-	-	24.1	-	33.9	5.6	3.4	<b>5.6</b>
<b>Other Fuel</b>									
Avg. Rate (GPH)	6.2	-	-	14.0	-	16.9	12.8	5.1	<b>16.2</b>
Estimated Fuel Use (Thousand Gal.)	17.2	-	-	0.4	-	1,533.9	181.4	16.5	<b>1,749.4</b>
% Standard Error	15.0	-	-	0.0	-	6.3	12.2	13.6	<b>5.6</b>
<b>Total Fuel Use</b>									
Avg. Rate (GPH)	13.1	80.5	332.7	13.5	47.8	16.3	17.6	4.7	<b>33.9</b>
Estimated Fuel Use (Thousand Gal.)	199,527.1	199,117.3	1,084,607.8	10,093.6	120,852.4	1,658.5	53,229.8	1,506.8	<b>1,670,593.4</b>
% Standard Error	2.0	4.3	1.5	2.7	2.4	7.9	11.8	2.7	<b>2.8</b>

Columns may not add to totals due to rounding procedures.

An asterisk indicates no active aircraft of that type reporting use of the fuel.

Source: FAA Survey

## 2.9 Average Age of Registered General Aviation Fleet (2005-2010)

Aircraft Type	Engine Type	Seats	Average Age in 2005 in Years	Average Age in 2006 in Years	Average Age in 2007 in Years	Average Age in 2008 in Years	Average Age in 2009 in Years	Average Age in 2010 in Years
<b>Single-Engine</b>	Piston	1-3	37	38	38	48.1	-	-
		4	35	36	36	38.2	-	-
		5-7	30	31	32	33.5	-	-
		8+	44	44	43	49.3	-	-
		All	-	-	-	-	42.2	46.3
	Turboprop	All	13	10	14	13.6	16.1	15.2
		Jet	34	34	35	44.4	44.0	44.1
<b>Multi-Engine</b>	Piston	1-3	32	32	33	48.9	-	-
		4	35	35	35	36.0	-	-
		5-7	36	36	39	39.3	-	-
		8+	38	39	40	41.6	-	-
		All	-	-	-	-	41.2	39.0
	Turboprop	All	25	26	27	28.8	28.0	27.0
		Jet	16	16	16	16.2	17.0	16.2
<b>All Airplanes</b>			<b>34</b>	<b>35</b>	<b>35</b>	<b>39.3</b>	<b>39.5</b>	<b>37.3</b>

Source: GAMA

## 2.10 U.S. General Aviation Operations (in Thousands) at FAA and Contract Control Towers (1992-2011)

Year	General Aviation Operations at Towers							Grand Total	
	General Aviation Operations at Towers			Contract Towers					
	Total	Itinerant & Overflight	Local	Total	Itinerant & Overflight	Local			
1992	36,945	21,281	15,664	1,409	767	642	38,355		
1993	35,228	20,377	14,851	1,373	760	613	36,601		
1994	34,092	20,208	14,484	1,561	855	706	36,254		
1995	32,265	18,886	13,379	3,661	1,974	1,687	35,927		
1996	29,250	17,575	11,675	6,049	3,249	2,801	35,298		
1997	28,232	17,097	11,135	8,601	4,572	4,029	36,833		
1998	28,522	17,157	11,365	10,118	5,240	4,877	38,046		
1999	29,110	17,422	11,688	10,890	5,597	5,292	40,000		
2000	27,002	16,286	10,717	12,876	6,558	6,318	39,879		
2001	24,784	14,949	9,835	12,843	6,484	6,359	37,627		
2002	24,092	14,553	9,539	13,562	6,898	6,634	37,653		
2003	22,598	13,577	9,021	12,926	6,654	6,272	35,524		
2004	21,762	13,190	8,572	13,205	6,817	6,388	34,968		
2005	20,705	12,430	8,275	13,456	6,885	6,571	34,161		
2006	19,728	11,897	7,830	13,392	6,844	6,549	33,120		
2007	19,367	11,616	7,751	13,768	6,961	6,807	33,135		
2008	18,336	10,828	7,509	12,953	6,540	6,413	31,289		
2009	17,429	10,770	6,659	12,156	6,585	5,571	29,585		
2010	16,741	10,430	6,310	11,837	6,517	5,319	28,577		
2011	16,324	10,206	6,118	11,737	6,374	5,363	28,061		

R = Revised, E = Estimated

Location operations at FAA Control Towers captures all civil local operations

Facilities includes Control Towers, TRACONS, CERAPs and RAPCONS

Traffic Count for GA Operation Data are provided by ATADS

Source: FAA Air Traffic Activity

## 2.11 U.S. General Aviation Operations and Contacts (in Thousands) (1997-2010)

	1997	1998	1999R	2000R	2001R	2002R	2003R	2004R	2005R	2006	2007	2008	2009	2010E
GA IFR Aircraft Handled at FAA Air Route Traffic Control Centers	8,239.0	8,745.0	8,807.7	8,744.4	8,024.0	8,180.7	7,999.8	8,350.4	8,367.7	8,197.0	8,294.3	7,670.7	6,331.6	6,549.5
GA Instrument Operations at FAA & Contract Facilities	19,093.0	20,087.0	20,897.8	21,221.7	19,705.5	19,655.8	18,629.8	18,619.5	17,985.9	-	-	-	-	-
GA TRACON Operations	-	-	-	20,799.2	19,274.9	19,212.5	18,094.2	18,006.8	17,388.9	17,005.3	16,747.4	15,756.5	14,126.9	13,853.6
Aircraft Contacts at FSS	2,804.0	2,600.0	2,524.0	2,438.0	2,196.0	2,170.0	2,050.0	1,976.0	-	-	-	-	-	-

R = Revised. E = Estimated.

Facilities include Control Towers, TRACONS, CERAPs and RAPCONS

Traffic Count for GA Operation Data provided by ATADS

FAA suspended tracking of IFR operations at Contract Facilities in 2005

GA Total TRACON Operations were titled "GA Instrument Operations at Airports with FAA Traffic Control Facilities" in previous publications

FAA suspended tracking of Flight Service Station (FSS) contacts in 2004

Source: FAA Air Traffic Activity

## 2.12 Estimated Active Experimental Aircraft Fleet (1997-2010)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Amateur Built	10,261	13,189	16,858	16,739	16,736	18,168	17,028	19,165	19,817	19,316	19,538	19,767	20,794	21,270
Exhibition	1,798	1,630	1,999	1,973	2,052	2,190	2,031	2,070	2,120	2,103	2,101	2,096	2,063	2,029
Other	2,620	1,684	1,671	1,694	1,633	1,578	1,491	1,565	1,691	1,629	1,589	1,501	1,562	1,485
<b>Total Experimental</b>	<b>14,679</b>	<b>16,503</b>	<b>20,528</b>	<b>20,406</b>	<b>20,421</b>	<b>21,936</b>	<b>20,550</b>	<b>22,800</b>	<b>23,628</b>	<b>23,048</b>	<b>23,228</b>	<b>23,364</b>	<b>24,419</b>	<b>24,784</b>
<b>% of G.A. Fleet</b>	<b>7.6%</b>	<b>8.1%</b>	<b>9.4%</b>	<b>9.4%</b>	<b>9.7%</b>	<b>10.4%</b>	<b>9.8%</b>	<b>10.4%</b>	<b>10.5%</b>	<b>10.4%</b>	<b>10.0%</b>	<b>10.2%</b>	<b>10.9%</b>	<b>11.1%</b>

Source: FAA Survey

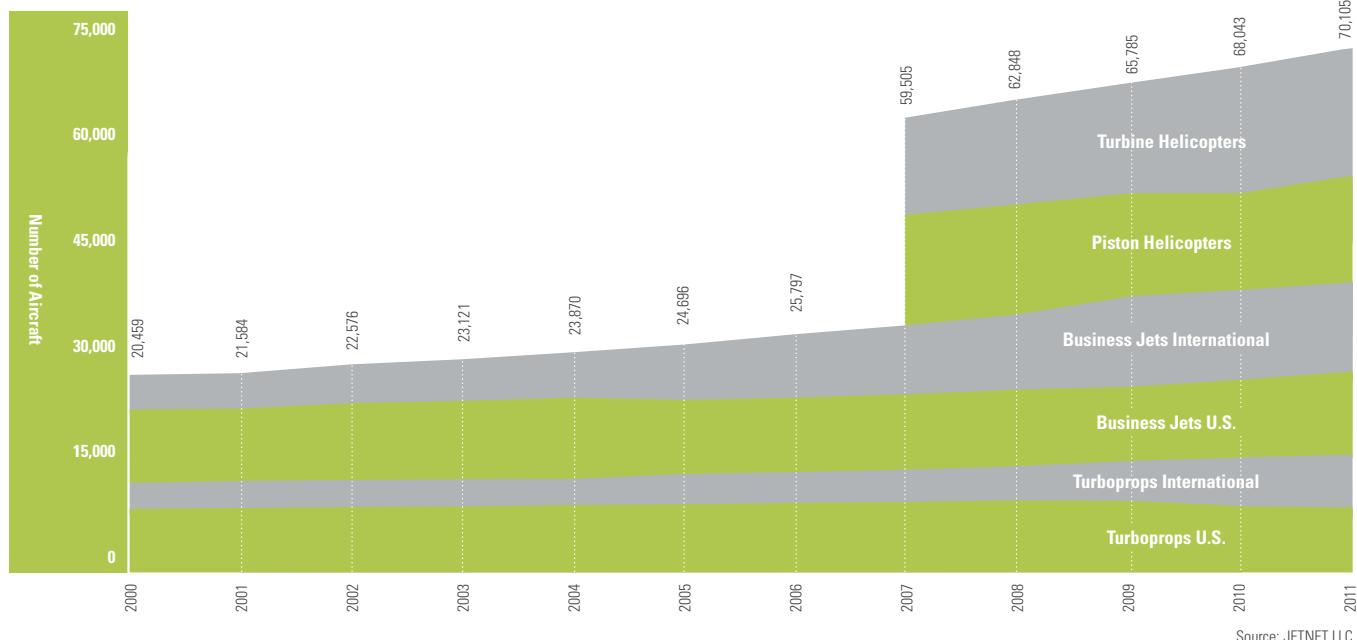
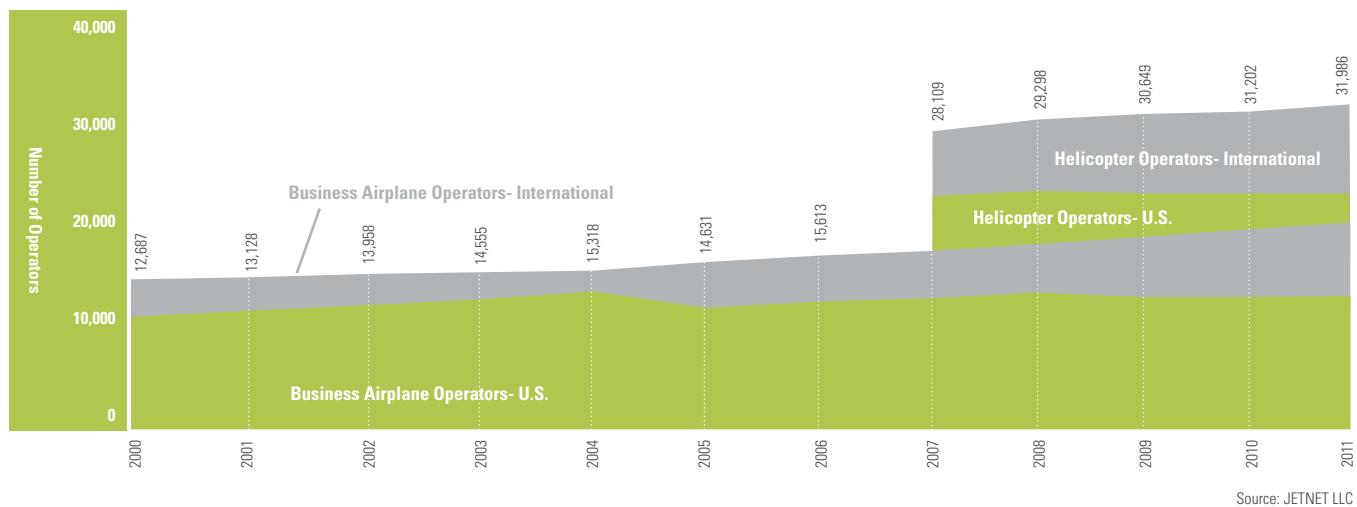
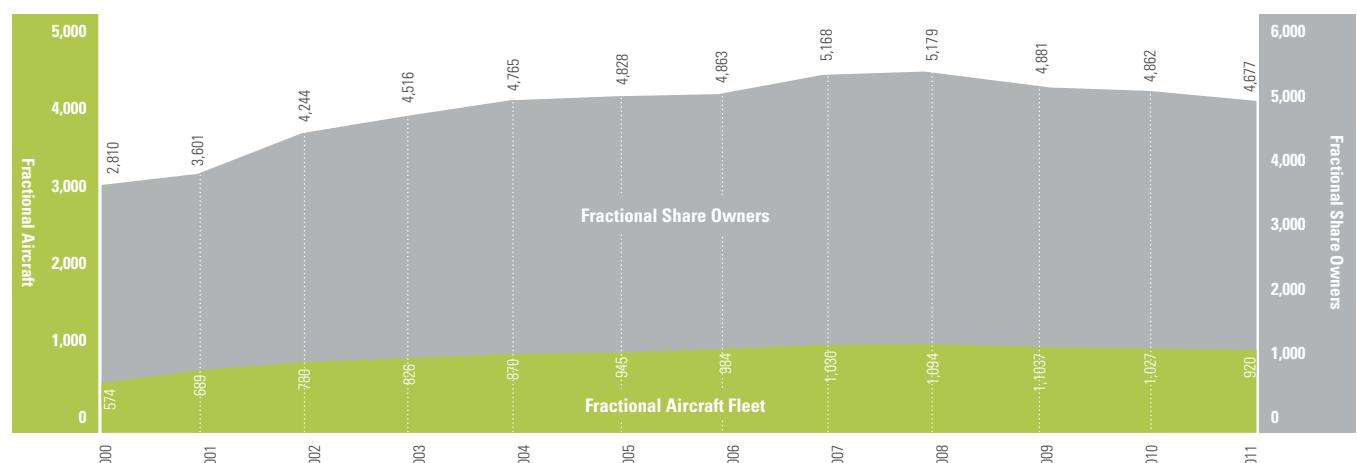
## 2.13 Estimated Hours Flown (in Thousands) of Experimental Aircraft Fleet (1997-2010)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Amateur Built	698	729	883	887	794	976	963	990	987	899	896	872	983	911
Exhibition	246	73	122	113	102	127	103	116	113	103	102	92	88	98
Other	382	269	242	279	261	242	226	216	239	216	277	192	215	217
<b>Total Experimental</b>	<b>1,326</b>	<b>1,071</b>	<b>1,247</b>	<b>1,279</b>	<b>1,157</b>	<b>1,345</b>	<b>1,292</b>	<b>1,322</b>	<b>1,339</b>	<b>1,218</b>	<b>1,274</b>	<b>1,155</b>	<b>1,286</b>	<b>1,226</b>
<b>% of G.A. Fleet Hours</b>	<b>4.8%</b>	<b>3.8%</b>	<b>4.0%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>5.0%</b>	<b>4.7%</b>	<b>4.7%</b>	<b>5.0%</b>	<b>4.4%</b>	<b>4.6%</b>	<b>4.4%</b>	<b>5.4%</b>	<b>4.9%</b>

Note: Prior to 1994, experimental aircraft included those built without a production certificate. Beginning in 1994, experimental includes aircraft with an experimental airworthiness certificate. These include research and development, amateur built, exhibition, racing, crew training, and market survey aircraft and aircraft used to show compliance with the Federal Aviation Regulations.

Source: FAA Survey



**FIGURE 2.3** Worldwide Turbine Aircraft Fleet (2000-2011)**FIGURE 2.4** Worldwide Turbine Business Aircraft Operators (2000-2011)**FIGURE 2.5** Fractional Aircraft and Share Owners (2000-2011)





# 03

Pilot  
Population

### 3.1 Active FAA Certificated Pilots and Non-Pilot Certificates Held (1990-2011)

Category	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
<b>Pilot-Total</b>	<b>617,128</b>	<b>627,588</b>	<b>594,285</b>	<b>613,746</b>	<b>590,349</b>	<b>597,109</b>	<b>609,737</b>	<b>618,633</b>	<b>625,011</b>	<b>631,762</b>	<b>612,274</b>
Student <sup>12</sup>	118,657	119,119	72,280	80,989	84,339	84,866	87,213	87,910	87,296	85,991	86,731
Recreational (only)	227	212	234	252	239	239	276	291	310	317	316
Sport (only) <sup>10</sup>	4,066	3,682	3,248	2,623	2,031	939	134	*	*	*	*
Airplane <sup>1</sup>											
- Private	194,441	202,020	211,619	222,596	211,096	219,233	228,619	235,994	241,045	245,230	243,823
- Commercial	120,865	123,705	125,738	124,746	115,127	117,610	120,614	122,592	123,990	125,920	120,502
- Airline Transport	142,511	142,198	144,600	146,838	143,953	141,935	141,992	142,160	143,504	144,708	144,702
Rotorcraft (only)	15,220	15,377	15,298	14,647	12,290	10,690	9,518	8,586	7,916	7,770	7,727
Glider (only) <sup>2</sup>	21,141	21,275	21,268	21,055	21,274	21,597	21,369	21,100	20,950	21,826	8,473
<b>Flight Instructor<sup>3</sup></b>	<b>97,409</b>	<b>96,473</b>	<b>94,863</b>	<b>93,202</b>	<b>92,175</b>	<b>91,343</b>	<b>90,555</b>	<b>89,596</b>	<b>87,816</b>	<b>86,089</b>	<b>82,875</b>
<b>Instrument Ratings<sup>3,4</sup></b>	<b>314,122</b>	<b>318,001</b>	<b>323,495</b>	<b>325,247</b>	<b>309,865</b>	<b>309,333</b>	<b>311,828</b>	<b>313,545</b>	<b>315,413</b>	<b>317,389</b>	<b>315,276</b>
<b>Nonpilot-Total<sup>5,6</sup></b>	<b>695,515</b>	<b>649,816</b>	<b>682,315</b>	<b>678,181</b>	<b>666,559</b>	<b>656,227</b>	<b>644,016</b>	<b>515,293</b>	<b>509,835</b>	<b>515,570</b>	<b>513,100</b>
Mechanic	335,431	308,367	329,027	326,276	322,852	323,097	320,293	317,111	313,032	315,928	310,850
Repairmen	40,802	41,196	41,389	41,056	40,277	40,329	40,030	39,231	37,248	37,114	40,085
Parachute Rigger	8,491	8,009	8,362	8,248	8,186	8,252	8,150	8,011	7,883	8,063	7,927
Ground Instructor	74,586	70,560	75,461	74,983	74,544	74,849	74,378	73,735	72,692	73,658	72,261
Dispatcher	21,363	16,576	20,132	19,590	19,043	18,610	18,079	17,493	16,955	16,695	16,070
Flight Navigator	146	171	181	222	250	264	298	336	382	431	509
Flight Engineer	47,659	48,569	51,022	53,135	54,394	55,952	57,756	59,376	61,643	63,681	65,398
Flight Attendant <sup>8</sup>	167,037	156,368	156,741	154,671	147,013	134,874	125,032	*	*	*	*

Category	2000	1999	1998	1997	1996	1995	1994 <sup>7</sup>	1993	1992	1991	1990
<b>Pilot-Total</b>	<b>625,581</b>	<b>635,472</b>	<b>618,298</b>	<b>616,342</b>	<b>622,261</b>	<b>639,184</b>	<b>654,088</b>	<b>665,069</b>	<b>682,959</b>	<b>692,095</b>	<b>702,659</b>
Student	93,064	97,359	97,736	96,101	94,947	101,279	96,254	103,583	114,597	120,203	128,663
Recreational <sup>9</sup>	340	343	305	284	265	232	241	206	187	161	87
Airplane <sup>1</sup>											
- Private	251,561	258,749	247,226	247,604	254,002	261,399	284,236	283,700	288,078	293,306	299,111
- Commercial	121,858	124,261	122,053	125,300	129,187	133,980	138,728	143,014	146,385	148,385	149,666
- Airline Transport	141,596	137,642	134,612	130,858	127,486	123,877	117,434	117,070	115,855	112,167	107,732
Rotorcraft (only)	7,775	7,728	6,964	6,801	6,961	7,183	8,719	9,168	9,652	9,860	9,567
Glider (only) <sup>2</sup>	9,387	9,390	9,402	9,394	9,413	11,234	8,476	8,328	8,205	8,033	7,833
<b>Flight Instructor<sup>3</sup></b>	<b>80,931</b>	<b>79,694</b>	<b>79,171</b>	<b>78,102</b>	<b>78,551</b>	<b>77,613</b>	<b>76,171</b>	<b>75,021</b>	<b>72,148</b>	<b>69,209</b>	<b>63,775</b>
<b>Instrument Ratings<sup>3,4</sup></b>	<b>311,944</b>	<b>308,951</b>	<b>300,183</b>	<b>297,409</b>	<b>297,895</b>	<b>298,798</b>	<b>302,300</b>	<b>305,517</b>	<b>306,169</b>	<b>303,193</b>	<b>297,073</b>
<b>Nonpilot-Total<sup>5,6</sup></b>	<b>547,453</b>	<b>538,264</b>	<b>549,588</b>	<b>540,892</b>	<b>534,427</b>	<b>651,341</b>	<b>571,358</b>	<b>559,726</b>	<b>540,548</b>	<b>517,462</b>	<b>492,237</b>
Mechanic	344,434	340,402	336,670	332,254	329,239	405,294	411,071	401,060	384,669	366,392	344,282
Repairmen	38,208	35,989	52,909	51,643	50,768	61,233	*	*	*	*	*
Parachute Rigger	10,477	10,447	10,459	10,336	10,269	11,824	8,631	8,417	8,163	7,616	10,094
Ground Instructor	72,326	71,238	70,334	69,366	68,573	96,165	77,789	76,050	73,276	70,086	66,882
Dispatcher	16,340	15,655	14,804	13,967	13,272	15,642	13,410	12,883	12,264	11,607	11,002
Flight Navigator	570	642	712	782	847	916	990	1,039	1,154	1,225	1,290
Flight Engineer	65,098	63,891	63,700	62,544	61,459	60,267	59,467	60,277	61,022	60,236	58,687

Note: The term airmen includes men and women certified as pilots, mechanics or other aviation technicians.

Source: FAA

1. Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate. Prior to 1995, these pilots were categorized as private, commercial, or airline transport, based on their airplane certificate. In 1995 and after, they are categorized based on their highest certificate. For example, if a pilot holds a private airplane certificate and a commercial helicopter certificate, prior to 1995, the pilot would be categorized as private; 1995 and after as commercial.

2. Glider pilots are not required to have a medical examination; however, the totals represent pilots who received a medical examination within the last 25 months.

3. Not included in total.

4. The instrument rating is shown on pilot certificates, but does not indicate additional certificate.

5. Number of non-pilot certificates represent all certificates on record since no medical examination is required. Data for 1996 and 1997 are limited to certificates held by those under 70 years of age.

6. Starting in 1995 non-pilots includes those who were excluded in prior years because of incomplete addresses and/or a request to be excluded from any mailing list.

7. 1994 counts based on medical certificates issued 27 or less months ago. All other years based on medical certificates issued 25 or less months ago.

8. Flight attendant information was first available from FAA Registry in 2005.

9. Recreational certificate was first issued in 1990.

10. Sport pilot certificate was first issued in 2005.

11. Prior to 1995 repairmen were included in the mechanic category.

12. The FAA changed the validity of student pilot certificates in 2010 through an amendment to 14 CFR 61.19(b)(1) resulting in the duration of validity for student pilot certificates for pilots under the age of 40 increasing to 60 months. This created an increase in the active student pilot population to 119,119 active airmen at the end of 2010 compared to the 72,280 a year ago.

### 3.2 Active FAA Certificated Pilots and Flight Instructors by Region and State (December 31, 2011)

FAA Region and State	Total Pilots	Students	Private	Commercial	Airline Transport	Recreational	Sport	Flight Instr. <sup>1</sup>
<b>Total<sup>2</sup></b>	<b>617,128</b>	<b>118,657</b>	<b>212,017</b>	<b>136,258</b>	<b>145,902</b>	<b>228</b>	<b>4,066</b>	<b>97,409</b>
<b>United States - Total<sup>3</sup></b>	<b>572,029</b>	<b>108,614</b>	<b>202,572</b>	<b>118,667</b>	<b>137,899</b>	<b>228</b>	<b>4,049</b>	<b>95,002</b>
<b>Non U.S. Total<sup>5</sup></b>	<b>45,099</b>	<b>10,043</b>	<b>9,445</b>	<b>17,591</b>	<b>8,003</b>	<b>0</b>	<b>17</b>	<b>2,407</b>
Alabama	7,725	1,425	2,698	2,237	1,315	2	48	1,368
Alaska	8,272	1,068	3,107	1,916	2,134	0	47	1,313
American Samoa	13	0	0	3	10	0	0	0
Arizona	19,551	4,128	5,870	4,229	5,224	3	97	3,644
Arkansas	4,991	1,012	1,847	1,222	850	1	59	730
California	62,606	11,889	25,827	13,214	11,384	5	287	9,431
Colorado	17,537	2,699	5,624	3,731	5,398	1	84	3,447
Connecticut	5,481	899	2,147	1,004	1,411	1	19	876
Delaware	1,424	314	458	277	368	0	7	239
District of Columbia	549	141	239	102	65	0	2	66
Federated States of Micronesia	3	1	0	2	0	0	0	1
Florida	52,037	11,572	14,490	10,515	15,092	11	357	8,965
Georgia	19,045	3,023	5,634	3,432	6,837	3	116	3,144
Guam	181	16	21	34	110	0	0	39
Hawaii	3,103	569	698	788	1,036	0	12	604
Idaho	4,963	901	2,012	1,141	853	1	55	788
Illinois	18,022	3,179	6,492	3,662	4,488	6	195	3,441
Indiana	10,336	1,845	4,115	2,158	2,047	9	162	1,715
Iowa	5,523	1,006	2,596	1,174	669	2	76	819
Kansas	7,292	1,258	3,104	1,598	1,274	3	55	1,413
Kentucky	6,139	969	1,780	1,072	2,272	4	42	1,117
Louisiana	5,770	1,164	1,964	1,518	1,078	4	42	854
Maine	2,598	419	1,078	541	520	1	39	396
Marshall Islands	4	0	0	2	2	0	0	0
Maryland	8,005	1,836	2,826	1,550	1,729	3	61	1,268
Massachusetts	8,155	1,655	3,458	1,522	1,477	2	41	1,221
Michigan	14,798	2,514	6,013	3,137	2,954	15	165	2,477
Minnesota	12,818	1,885	4,705	2,641	3,502	1	84	2,469
Mississippi	4,355	1,070	1,364	979	914	2	26	665
Missouri	9,482	1,703	3,612	1,936	2,129	3	99	1,575
Montana	3,974	739	1,634	982	596	3	20	651
Nebraska	3,611	764	1,454	827	536	0	30	484
Nevada	6,954	1,059	2,120	1,564	2,188	0	23	1,273
New Hampshire	3,750	490	1,250	652	1,324	5	29	669
New Jersey	9,429	1,847	3,515	1,798	2,227	5	37	1,616
New Mexico	4,912	953	1,919	1,286	711	2	41	636
New York	17,067	4,227	6,493	3,352	2,873	24	98	2,623
North Carolina	14,497	2,559	5,217	2,758	3,861	2	100	2,240
North Dakota	3,245	654	1,177	1,147	259	0	8	462
Northern Mariana Islands	13	3	1	6	3	0	0	7
Ohio	16,353	2,751	6,333	3,220	3,843	39	167	3,017
Oklahoma	8,312	2,170	3,026	1,716	1,357	1	42	1,279
Oregon	9,461	1,874	3,986	2,250	1,290	4	57	1,524
Palau	1	0	0	1	0	0	0	0
Pennsylvania	16,560	3,133	6,161	3,080	4,021	23	142	2,723
Puerto Rico	1,828	653	462	362	329	0	22	234
Rhode Island	1,049	197	408	218	220	1	5	153
South Carolina	6,655	1,190	2,422	1,353	1,644	0	46	963
South Dakota	2,247	391	902	579	331	1	43	383
Tennessee	11,931	1,877	3,609	2,280	4,086	2	77	2,040
Texas	50,246	9,757	15,609	9,677	14,926	6	271	8,164
Utah	8,325	1,824	2,635	1,960	1,860	0	46	1,504
Vermont	1,296	200	562	271	250	2	11	182
Virgin Islands	177	41	71	27	38	0	0	23
Virginia	14,807	2,861	4,819	3,096	3,922	11	98	2,436
Washington	20,028	3,533	6,888	4,087	5,381	3	136	3,386
West Virginia	1,878	418	766	373	290	2	29	259
Wisconsin	9,676	1,575	4,255	1,689	1,970	9	178	1,588
Wyoming	1,942	389	845	397	297	0	14	272
AA - Americas <sup>4</sup>	30	1	5	10	14	0	0	7
AE - Europe and Canada <sup>4</sup>	422	91	121	142	67	0	1	67
AP - Pacific <sup>4</sup>	575	233	128	170	43	0	1	52

1. Not included in total.

2. Includes non-U.S total

3. Includes Federated States of Micronesia, Marshall Islands, Northern Mariana Islands and Palau

4. Military personnel holding civilian certificates and stationed in foreign country

5. "Non US" includes non-US nationals that hold FAA certificates

Source: FAA

### 3.3 Active FAA Pilot Certificates Held by Category and Age Group of Holder (December 31, 2011)

Age Group	Type of Pilot Certificate							
	Total Pilots	Student	Recreational	Sport Pilots	Private	Commercial	Airline Transport	CFI
<b>Total</b>	<b>617,128</b>	<b>118,657</b>	<b>228</b>	<b>4,066</b>	<b>212,017</b>	<b>136,258</b>	<b>145,902</b>	<b>97,409</b>
14-15	163	163	0	0	0	0	0	0
16-19	15,159	11,619	4	19	3,246	240	0	31
20-24	62,731	30,172	45	71	16,307	12,216	140	3,780
25-29	76,127	24,163	16	96	16,212	22,592	3,194	9,854
30-34	64,740	15,050	5	116	14,087	15,270	9,389	10,823
35-39	62,320	11,068	8	151	14,986	11,275	14,763	10,069
40-44	71,754	9,728	9	249	18,955	10,873	20,655	11,285
45-49	69,154	5,052	11	457	19,397	9,804	24,011	10,422
50-54	77,064	4,541	19	695	26,099	10,939	25,026	9,745
55-59	74,019	3,256	30	767	28,662	11,834	20,174	9,296
60-64	61,994	1,924	31	656	23,828	11,902	15,057	8,596
65-69	43,483	1,134	21	442	16,528	10,377	8,231	6,750
70-74	19,728	508	10	224	7,448	4,637	3,220	3,681
75-79	10,147	191	8	98	3,832	2,701	1,377	1,940
80 and over	5,954	88	11	25	2,430	1,598	665	1,137

Source: FAA

### 3.4 Average Age of Active FAA Pilots by Category (1993-2011)

Year	Average All Pilots	Type of Pilot Certificate					
		Student	Recreational	Sport Pilot	Private	Commercial	Airline Transport
1993	41.3	33.7	45.5	*	42.7	41.9	44.1
1994	41.9	34.3	46.5	*	43.2	42.4	44.4
1995	42.9	34.5	48.3	*	44.6	43.7	44.9
1996	43.2	34.6	49.3	*	45.1	44.1	45.1
1997	43.6	34.6	49.5	*	45.6	44.6	45.6
1998	43.8	34.7	49.8	*	45.9	45.0	45.4
1999	43.6	34.6	49.5	*	45.6	44.6	45.3
2000	43.7	34.1	49.8	*	45.6	44.9	45.8
2001	44.0	33.3	50.8	*	46.0	45.0	46.0
2002	44.4	33.7	51.0	*	46.2	45.5	46.6
2003	44.7	34.0	51.5	*	46.5	45.6	47.0
2004	45.1	34.2	51.3	*	47.0	45.9	47.5
2005	45.5	34.6	50.9	53.2	47.4	46.0	47.8
2006	45.6	34.4	51.5	52.9	47.7	46.1	48.1
2007	45.7	34.0	52.4	52.9	48.0	46.1	48.3
2008	45.1	33.6	50.1	53.2	46.9	44.8	48.5
2009	45.3	33.5	50.4	53.5	47.1	44.2	48.9
2010	44.2	31.4	50.8	53.8	47.6	44.2	49.4
2011	44.4	31.4	48.8	54.4	47.9	44.4	49.7

Source: FAA

### 3.5 Active FAA Women Pilots and Non-Pilot Certificates Held (2001-2011)

Category	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
<b>Pilot-Total</b>	<b>41,316</b>	<b>39,464</b>	<b>36,808</b>	<b>37,981</b>	<b>35,784</b>	<b>36,101</b>	<b>36,584</b>	<b>37,243</b>	<b>37,694</b>	<b>38,257</b>	<b>34,706</b>
Student	14,683	13,913	8,450	9,127	9,559	9,640	9,717	9,857	9,897	10,082	10,230
Recreational (only)	18	12	13	20	17	17	20	21	24	23	20
Sport (only)	135	117	98	79	64	26	7	*	*	*	*
Airplane <sup>1</sup>											
- Private	12,927	12,911	14,322	15,015	13,694	14,111	14,517	15,036	15,487	15,906	13,894
- Commercial	7,956	7,137	8,289	8,083	7,101	7,236	7,315	7,421	7,436	7,454	5,932
- Airline Transport	5,597	5,404	5,636	5,657	5,349	5,071	5,008	4,908	4,850	4,792	4,630
<b>Flight Instructor<sup>2</sup></b>	<b>6,350</b>	<b>6,217</b>	<b>6,362</b>	<b>6,293</b>	<b>6,232</b>	<b>6,158</b>	<b>6,067</b>	<b>5,970</b>	<b>5,811</b>	<b>5,667</b>	<b>5,386</b>
<b>Nonpilot-Total<sup>3</sup></b>	<b>155,918</b>	<b>146,239</b>	<b>147,052</b>	<b>144,968</b>	<b>138,452</b>	<b>19,633</b>	<b>19,220</b>	<b>18,666</b>	<b>18,030</b>	<b>17,612</b>	<b>17,114</b>
Mechanic <sup>3</sup>	7,487	7,078	6,980	6,740	6,524	6,345	6,152	5,932	5,734	5,995	5,295
Repairmen <sup>3</sup>	2,278	2,310	2,335	2,284	2,193	2,180	2,108	2,039	1,800	1,722	1,789
Parachute Rigger <sup>3</sup>	683	609	633	615	594	584	556	540	521	500	475
Ground Instructor <sup>3</sup>	5,880	5,609	5,860	5,785	5,726	5,669	5,612	5,500	5,385	5,321	5,169
Dispatcher <sup>3</sup>	3,744	3,064	3,381	3,230	3,087	2,934	2,805	2,647	2,520	2,410	2,262
Flight Navigator	1	1	1	1	1	1	1	1	0	0	0
Flight Engineer	1,731	1,761	1,828	1,894	1,901	1,920	1,986	2,007	2,070	2,100	2,124
Flight Attendant	134,114	125,807	126,034	124,419	118,426	108,559	100,630	*	*	*	*

1. Includes pilots with an airplane only certificate. Also includes those with an airplane and a helicopter and/or glider certificate.

Source: FAA

2. Not included in total.

3. No medical examination required. Numbers represent all certificates on record.

### 3.6 FAA Total Active and Instrument-Rated Pilots (1982-2011)

Calendar Year	Total Active Pilots	Instrument Rated	Percent of Total with Instrument Rating
1982	576,894	255,073	44.2%
1983	570,807	254,271	44.5%
1984	572,295	256,584	44.8%
1985	562,888	258,559	45.9%
1986	558,845	262,388	47.0%
1987	553,637	266,122	48.1%
1988	557,103	273,804	49.1%
1989	557,466	282,804	50.7%
1990	573,909	297,073	51.8%
1991	571,731	306,193	53.6%
1992	568,175	306,169	53.9%
1993	561,280	305,517	54.4%
1994	557,593	302,300	54.2%
1995	537,673	298,798	55.6%
1996	527,049	297,895	56.5%
1997	520,241	297,409	57.2%
1998	520,257	300,183	57.7%
1999	537,770	308,951	57.5%
2000	532,177	311,944	58.6%
2001	525,227	315,276	60.0%
2002	545,454	317,389	58.2%
2003	537,405	315,413	58.7%
2004	530,432	313,545	59.1%
2005	522,112	311,828	59.7%
2006	511,062	309,333	60.5%
2007	503,740	309,865	61.5%
2008	529,882	325,247	61.4%
2009	518,519	323,495	62.4%
2010	504,572	318,001	63.0%
2011	494,177	314,122	63.6%

Total pilots excludes student, sport and recreational pilots.

Source: FAA

### 3.7 FAA Pilot Certificates Issued by Category (1978-2011)

Year	Student		Private		Commercial		Airline Transport		Helicopter (only)		Glider (only)	
	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional
1978	137,032	*	58,064	16,048	11,789	17,501	6,912	5,921	1,122	287	759	188
1979	135,956	*	54,466	16,466	12,627	17,793	8,981	6,603	1,300	283	642	157
1980	102,301	*	50,458	16,035	12,452	16,015	7,116	6,289	1,721	272	583	151
1981	111,531	*	45,713	14,897	10,657	12,146	4,763	5,991	1,985	302	629	164
1982	90,816	*	52,144	16,276	11,048	11,910	5,037	7,956	2,256	330	793	184
1983	92,239	*	41,210	12,721	8,789	9,513	5,643	8,187	1,932	315	606	162
1984	90,167	*	36,545	11,784	7,702	8,895	5,099	9,335	1,808	319	524	139
1985	86,060	*	35,402	11,636	8,404	7,197	6,081	9,192	2,105	207	537	138
1986	88,699	*	34,816	12,672	8,889	9,241	6,498	10,372	2,209	234	514	109
1987	85,611	*	42,287	16,302	11,314	11,635	7,678	11,956	2,217	293	542	74
1988	86,193	*	39,900	15,800	12,042	10,597	7,461	11,209	1,947	287	475	28
1989	87,698	*	35,360	22,240	13,759	11,778	7,829	12,698	2,240	252	336	22
1990	88,586	*	41,749	19,299	15,500	12,584	8,013	13,540	2,700	266	378	41
1991	82,205	*	49,580	23,630	16,869	13,506	8,437	13,979	3,344	291	487	29
1992	78,377	*	39,968	19,419	14,354	11,630	7,699	13,391	2,684	291	376	32
1993	69,178	*	39,060	18,801	12,645	10,466	6,129	12,995	2,310	30	341	28
1994	66,501	*	32,787	14,568	9,237	8,630	5,360	10,963	1,801	267	320	25
1995	60,497	*	28,333	15,331	9,133	9,042	5,965	13,641	1,724	290	373	83
1996	56,653	*	24,714	18,199	10,245	10,494	7,444	17,229	1,638	349	633	195
1997	60,941	*	21,552	13,522	8,988	9,587	7,045	16,266	1,385	296	501	161
1998	63,037	756	26,297	15,966	10,042	10,269	7,547	19,085	1,530	211	472	105
1999	58,278	1,030	24,630	15,222	9,737	9,963	6,721	19,380	1,514	222	423	98
2000	58,042	1,070	27,223	17,223	11,813	11,652	7,715	20,558	1,776	234	455	62
2001	61,897	1,161	25,372	16,807	11,499	11,115	7,070	21,357	1,698	218	403	77
2002	65,421	1,317	28,659	18,607	12,299	11,628	4,718	18,502	2,073	275	336	38
2003	58,842	1,230	23,866	14,899	9,670	8,872	3,892	13,196	2,013	269	312	47
2004	59,202	1,302	23,031	14,234	9,836	9,635	4,255	15,328	2,736	366	309	43
2005	53,576	1,418	20,889	12,952	8,834	8,874	4,750	15,534	2,917	521	290	27
2006	61,448	1,551	20,217	13,079	8,687	9,603	4,748	15,942	3,569	816	298	42
2007	66,953	1,450	20,299	13,970	9,318	9,574	5,918	15,973	4,073	1,041	263	14
2008	61,194	1,507	19,052	14,409	10,595	10,202	5,204	15,658	3,639	930	204	11
2009	54,876	2,009	19,893	14,570	11,350	9,399	3,113	11,605	3,648	1,011	249	10
2010	54,064	*	13,457	9,012	5,774	5,777	2,980	9,316	1,982	621	219	6
2011	*	*	14,863	8,243	5,843	6,053	4,587	10,882	2,146	691	215	6

An additional rating is added to an existing pilot certificate (e.g., instrument rating added to a private certificate.)

Source: FAA

# U.S. CIVIL AIRMEN



## DEFINITIONS

**Active Pilot** — A pilot who holds a pilot certificate and a valid medical certificate (one that was issued within the last 25 months.)

**Air Carrier** — An aircraft with a seating capacity of more than 30 seats or a maximum payload capacity of more than 7,500 pounds carrying passengers or cargo for hire or compensation.

**Airmen** — A pilot, mechanic, or other licensed aviation technician. The term refers to men and women.

**Airmen Certificate** — A document issued by the Administrator of the Federal Aviation Administration certifying that the holder complies with the regulations governing the capacity in which the certificate authorizes the holder to act as an airman in connection with aircraft.



## PILOT CATEGORIES

**Student Pilot** — A student pilot must be 16 years old, medically certificated by an FAA medical examiner and may only fly solo or with an instructor. Each solo flight must be approved as to destination and duration. A student pilot may not operate an aircraft that is carrying passengers or that is carrying property for compensation or hire.

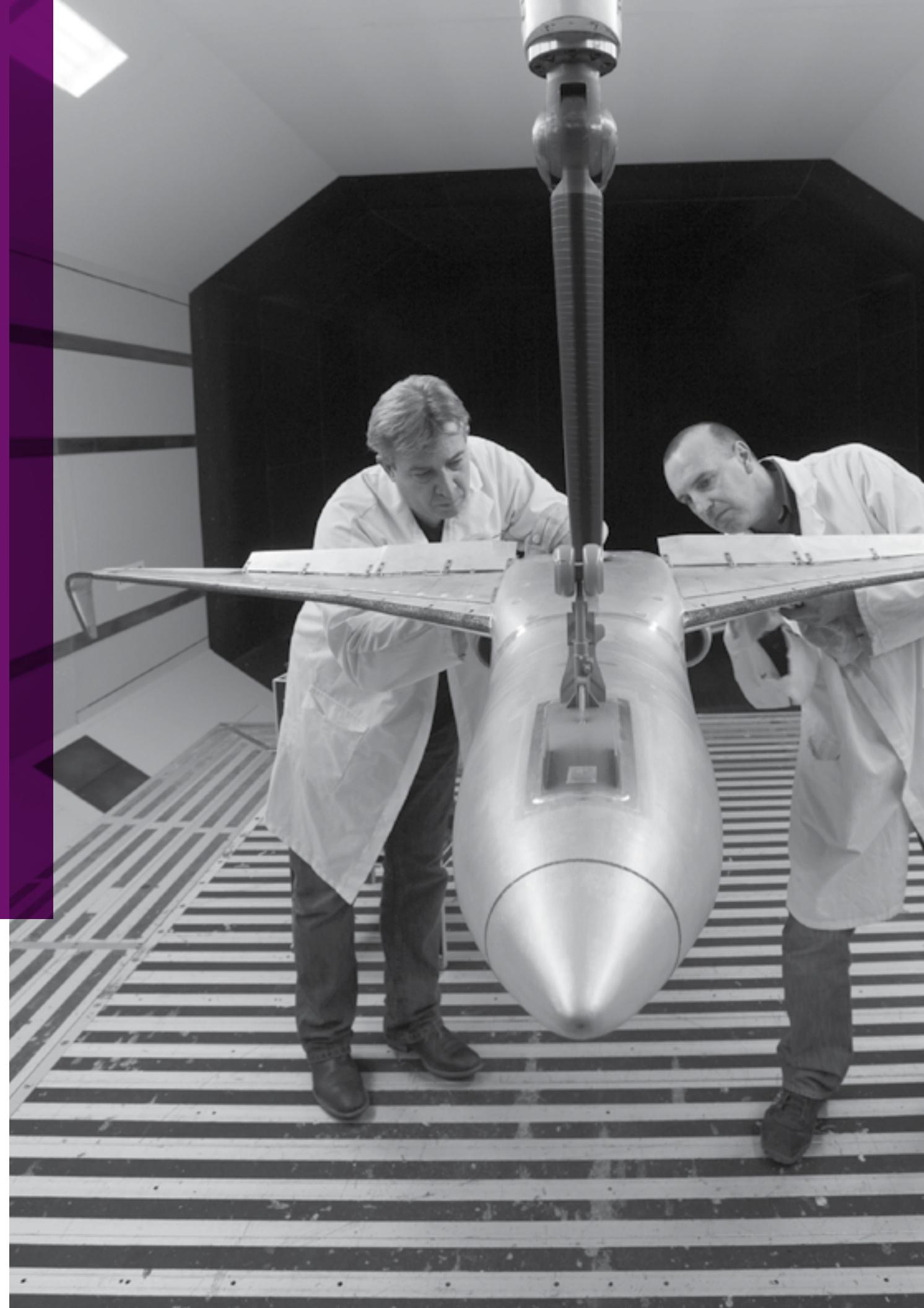
**Recreational Pilot** — A recreational pilot may fly no more than one passenger in a light, single engine aircraft with no more than four seats, during good weather and daylight hours, and unless otherwise authorized, no more than 50 miles from the home airport. A recreational pilot may not operate an aircraft that is carrying passengers or that is carrying property for compensation or hire.

**Sport Pilot** — A sport pilot may operate a light-sport aircraft (a small, low-powered aircraft), under a limited set of flight conditions. The certificate does not require an FAA medical examination, but the pilots can carry a driver's license as proof of medical competence. Holders of a sport pilot certificate may fly an aircraft with a standard airworthiness certificate if the aircraft meets the definition of a light-sport aircraft.

**Private Pilot** — A private pilot may, with appropriate training, ratings and endorsements, carry passengers in any aircraft, day or night, good weather or bad. The private pilot may not act as pilot-in-command of an aircraft that is carrying passengers for compensation or hire nor act as pilot-in-command of an aircraft that is being operated for compensation or hire (e.g.: one that has been hired to do pipeline patrol but carries no passengers).

**Commercial Pilot** — A commercial pilot may act as pilot-in-command of an aircraft that is carrying passengers for compensation or hire, but not an aircraft in air carrier service, or act as pilot-in-command of an aircraft that is being operated for compensation or hire (e.g.: one that has been hired to do pipeline patrol but carries no passengers).

**Airline Transport Pilot** — An airline transport pilot may act as pilot-in-command of an aircraft in air carrier service.





# 04

Airports and  
Aeronautical Facilities

#### 4.1 U.S. Civil and Joint Use Airports, Heliports, and Seaplane Bases on Record by Type of Ownership (December 31, 2009)

State or Territory	State Total	Public Use		Civil Private Use Landing Facilities							Military Only Use	
		Total	Part 139	Total	Airports	Heliports	Seaplane Bases	Other				
		Gliderports	Balloon-ports		Ultralight Flight-parks							
<b>Grand Total</b>	<b>19,750</b>	<b>5,178</b>	<b>559</b>	<b>14,120</b>	<b>8,405</b>	<b>5,425</b>	<b>290</b>	<b>31</b>	<b>13</b>	<b>134</b>	<b>274</b>	
<b>United States - Total</b>	<b>19,729</b>	<b>5,168</b>	<b>551</b>	<b>14,111</b>	<b>8,403</b>	<b>5,418</b>	<b>290</b>	<b>31</b>	<b>13</b>	<b>134</b>	<b>272</b>	
Alabama	281	98	10	172	87	81	4	-	-	-	11	
Alaska	734	408	26	307	245	38	24	-	-	-	19	
American Samoa	4	3	3	1	1	-	-	-	-	-	-	
Arizona	314	79	14	219	107	112	-	2	-	6	8	
Arkansas	307	99	9	199	118	81	-	2	-	4	3	
California	960	257	36	671	263	404	4	3	-	1	28	
Colorado	449	76	16	365	186	179	-	1	1	1	5	
Connecticut	146	23	5	122	35	82	5	-	-	1	-	
Delaware	42	11	1	30	21	9	-	-	-	-	1	
District of Columbia	20	3	2	13	-	13	-	-	-	-	4	
Florida	857	127	25	697	370	289	38	2	-	5	26	
Georgia	461	110	10	339	227	110	2	1	-	1	10	
Guam	3	1	1	1	-	1	-	-	-	-	1	
Hawaii	50	14	7	30	14	16	-	-	-	-	6	
Idaho	280	119	7	158	108	49	1	-	-	2	1	
Illinois	788	115	17	665	413	247	5	2	-	5	1	
Indiana	610	107	12	487	348	123	16	-	-	11	5	
Iowa	289	121	8	162	79	83	-	-	-	3	3	
Kansas	383	141	10	238	203	35	-	1	1	-	2	
Kentucky	223	60	7	157	95	62	-	-	-	4	2	
Louisiana	480	75	9	381	150	219	12	-	-	20	4	
Maine	175	68	6	104	64	17	23	-	-	2	1	
Maryland	226	37	3	182	111	67	4	-	-	-	7	
Massachusetts	241	40	8	198	39	142	17	-	1	1	1	
Michigan	467	228	20	236	142	89	5	-	-	2	1	
Midway Atoll	2	1	1	1	1	-	-	-	-	-	-	
Minnesota	469	154	9	313	203	59	51	-	-	1	1	
Mississippi	244	80	11	157	107	50	-	-	-	1	6	
Missouri	518	132	11	380	251	128	1	-	-	3	3	
Montana	258	121	15	134	102	31	1	-	-	1	2	
N. Mariana Islands	11	5	3	6	-	6	-	-	-	-	-	
Nebraska	244	86	9	156	122	34	-	-	-	-	2	
Nevada	125	49	5	69	43	26	-	1	-	1	5	
New Hampshire	139	25	3	114	28	79	7	-	-	-	-	
New Jersey	314	46	4	256	54	196	6	-	5	-	7	
New Mexico	174	61	9	107	81	26	-	-	-	1	5	
New York	603	148	24	448	263	175	10	2	1	3	1	
North Carolina	429	112	15	300	212	88	-	1	1	4	11	
North Dakota	281	89	8	190	175	15	-	-	-	-	2	
Ohio	729	170	13	554	344	209	1	2	1	1	1	
Oklahoma	390	140	4	240	160	80	-	-	-	4	6	
Oregon	420	97	10	322	231	90	1	1	-	-	-	
Pennsylvania	821	132	16	662	316	339	7	2	-	18	7	
Puerto Rico	52	12	4	39	6	31	2	-	-	-	1	
Rhode Island	31	8	1	22	3	17	2	-	1	-	-	
South Carolina	196	68	8	119	86	31	2	1	-	3	5	
South Dakota	178	74	7	103	70	33	-	-	-	-	1	
Tennessee	311	81	8	226	124	101	1	-	-	2	2	
Texas	2,006	391	31	1,578	1,050	528	-	6	-	9	22	
Utah	142	46	9	93	44	49	-	-	-	-	3	
Vermont	81	16	2	65	45	14	6	-	-	-	-	
Virgin Islands	8	2	2	6	-	4	2	-	-	-	-	
Virginia	427	66	7	340	213	125	2	1	1	1	18	
Wake Island	1	-	-	-	-	-	-	-	-	-	1	
Washington	552	137	11	403	240	157	6	-	-	3	9	
West Virginia	120	35	8	83	38	35	10	-	-	1	1	
Wisconsin	565	133	9	422	315	95	12	-	-	8	2	
Wyoming	119	41	10	78	52	26	-	-	-	-	-	

Source: FAA Airport Engineering Division

## 4.2 FAA Air Route Facilities and Services (1972-2011)

Year	VOR VORTAC	Non-Directional Beacons	Air Route Traffic Ctrl.	Air Traffic Cont. Towers	Flight Service Stations	Int'l Flight Service Stations	Instrument Landing Systems	WAAS-Capable Procedures	Airport Surveillance Radar	ADS-B Radios (IOC)
1972	991	706	27	355	324	7	403	*	125	*
1973	995	739	27	403	315	7	467	*	142	*
1974	1,000	793	26	417	320	7	490	*	156	*
1975	1,011	848	25	487	321	7	580	*	177	*
1976	1,020	920	25	488	321	7	640	*	175	*
1977	1,021	959	25	495	319	7	678	*	182	*
1978	1,020	988	25	494	319	6	698	*	185	*
1979	1,028	1,015	25	499	318	6	753	*	192	*
1980	1,037	1,055	25	502	317	6	796	*	192	*
1981	1,033	1,123	25	501	316	6	840	*	199	*
1982	1,029	1,143	25	492	316	6	884	*	197	*
1983	1,032	1,183	25	494	316	5	934	*	197	*
1984	1,035	1,211	25	497	310	5	955	*	197	*
1985	1,039	1,222	25	500	302	4	968	*	198	*
1986	1,043	1,239	25	686	293	3	977	*	312	*
1987	1,039	1,212	25	500	302	4	968	*	312	*
1988	1,043	1,239	25	686	293	3	977	*	311	*
1989	1,046	1,263	25	686	255	3	1,100	*	312	*
1990	1,045	1,271	25	686	235	3	1,120	*	311	*
1991	1,045	1,295	24	694	192	3	1,114	*	318	*
1992	1,044	1,314	24	691	179	3	1,177	*	312	*
1993	1,046	1,263	24	686	255	3	1,100	*	312	*
1994	1,045	1,271	24	686	235	3	1,120	*	311	*
1995	1,045	1,295	24	694	192	3	1,114	*	318	*
1996	1,044	1,314	24	691	179	3	1,177	*	312	*
1997	1,041	1,344	24	684	135	3	1,231	*	310	*
1998	1,039	1,348	24	683	128	3	1,238	*	307	*
1999	1,041	1,320	24	680	75	3	1,327	*	295	*
2000	993	1,199	25	663	75	3	1,370	*	297	*
2001	1,116	1,675	24	678	76	3	1,388	*	292	*
2002	*	*	21	*	76	3	*	*	*	*
2003	*	*	21	*	76	3	*	*	*	*
2004	1,119	1,685	21	688	76	3	1,473	*	227	*
2005	1,111	1,613	21	693	76	3	1,490	*	226	*
2006	*	*	21	496	76	*	*	*	*	*
2007	*	*	21	502	76	*	*	*	*	*
2008	*	*	21	504	4	*	*	*	*	*
2009	*	*	21	509	4	*	*	*	*	*
2010	*	*	21	511	4	*	*	*	*	202
2011	*	*	21	511	4	*	*	11,828	*	339

The FAA stopped publishing the "Air Traffic Factbook" in 2008. GAMA is working to backfill missing data.

Source: FAA

Air Traffic Control data shows federal, non-federal and military through 2005. 2006 through 2011 are FAA and contract.

Honolulu control facility as well as San Juan and Guam CERAP not included in ARTCC data.

ADS-B radios only lists those that have reached Initial Operating Capability (IOC). The 2010 figure is from November.

WAAS-capable approach procedures include LNAV, LNAV/VNAV, LPV, LP with 200' HAT, LP procedures and GPS stand-alone procedures of which 2,748 are LPV in 2011 data.

## 4.3 U.S. Airports by Type (2000-2010)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Civil Public Use Airports	5,317	5,294	5,286	5,286	5,288	5,270	5,233	5,221	5,202	5,178	5,175
Civil Public Use Part 139	651	635	633	628	599	575	604	565	560	559	551
Civil Public Use Non-Part 139	*	*	*	*	*	*	*	4,556	4,642	4,619	4,624
Civil Public Use Abandoned	13	26	16	19	10	14	27	18	16	18	14
Newly Established Public Use	*	*	*	*	*	*	*	9	3	5	16
Total Civil Private Use Airports	13,964	14,062	14,286	14,295	14,532	14,584	14,757	14,839	14,451	14,298	14,353
Civil Private Use Airports Abandoned	156	220	121	214	117	115	133	297	461	360	121
Newly Established Private Use	*	*	*	*	*	*	*	274	151	214	212
Military Airports	88	75	75	73	57	*	*	261	277	274	274
Total Airports by Type	19,281	19,356	19,572	19,581	19,820	19,854	19,983	20,341	19,930	19,750	19,802
Airports	*	*	*	*	*	*	*	13,822	13,589	13,494	13,473
Heliports	*	*	*	*	*	*	*	5,708	5,568	5,571	5,650
Seaplane Bases	*	*	*	*	*	*	*	527	503	497	496
Gliderports	*	*	*	*	*	*	*	35	35	35	35
Stolports	*	*	*	*	*	*	*	87	82	*	*
Balloon Ports	*	*	*	*	*	*	*	15	14	14	13
Ultralight Flightparks	*	*	*	*	*	*	*	147	139	139	135

The category "stolport" was eliminated in 2009.

Source: FAA AOA Handbook and Airports Office

The data is for December 31 for the year listed.

Certificated airports service air carrier operations with aircraft seating more than 9 passenger seats (Part 139).

#### 4.4 U.S. Airports Ranked by Number of General Aviation Operations at Tower (2011)

Rank 2011	Facility	Airport Name and State	General Aviation Operations				Local Civil GA	Total Airport Operations	Total GA Operations	GA as % of Total	Total Tower Operations, Incl. Commercial and Military					
			IFR GA		VFR GA											
			Itinerant	Overflight	Itinerant	Overflight										
1	VNY	Van Nuys, CA	36,973	11,184	155,039	24,147	95,044	298,049	322,387	94.5%	341,286					
2	DVT	Phoenix Deer Valley, AZ	7,808	1,067	116,278	5,024	189,276	317,443	319,453	98.7%	323,642					
3	LGB	Long Beach, CA	28,245	317	83,416	14,281	146,625	295,902	272,884	87.8%	310,727					
4	APA	Centennial Airport, CO	37,691	105	88,421	3,551	125,025	294,591	254,793	84.1%	303,043					
5	GFK	Grand Forks Int'l, ND	6,209	6	10,493	420	231,156	347,472	248,284	71.3%	348,058					
6	PRC	Ernest A. Love Field, AZ	2,215	-	72,111	209	163,566	242,321	238,101	98.1%	242,758					
7	FFZ	Falcon Field, AZ	2,860	32	95,369	9,099	116,257	220,080	223,617	97.5%	229,430					
8	SEE	Gillespie Field, CA	15,339	133	72,086	4,400	131,562	219,621	223,520	99.6%	224,344					
9	DAB	Daytona Beach, FL	28,007	328	137,874	3,525	47,723	220,970	217,457	96.6%	225,218					
10	HIO	Portland-Hillsboro Airpor, OR	15,408	205	54,362	3,430	137,822	214,243	211,227	96.9%	217,957					
11	SFB	Sanford-Orlando, FL	29,290	34	48,765	1,526	127,509	217,815	207,124	94.4%	219,444					
12	MYF	Montgomery Field Airport, CA	24,784	174	82,035	9,773	89,747	199,141	206,513	98.6%	209,465					
13	RVS	Richard Lloyd Jones, OK	18,084	131	72,507	1,442	106,673	199,412	198,837	98.5%	201,792					
14	MLB	Melbourne International Airport, FL	26,211	162	71,848	1,588	91,604	197,334	191,413	95.4%	200,560					
15	BFI	Boeing Field, King County Airport, WA	26,987	2,777	74,737	29,985	54,010	228,727	188,496	65.7%	286,889					
16	FRG	Republic Airport, NY	14,454	239	83,468	4,420	80,369	188,219	182,950	94.0%	194,710					
17	PAO	Palo Alto Airport, CA	5,367	1,938	66,919	8,981	99,051	172,814	182,256	98.4%	185,147					
18	SNA	John Wayne-Orange County, CA	36,330	303	61,867	11,928	71,673	261,812	182,101	66.2%	275,143					
19	XFL	Flagler Country Airport, FL	2,497	191	42,683	212	129,642	176,309	175,225	99.1%	176,755					
20	DWH	David Wayne Hooks Mem. Airport	16,349	105	70,931	3,480	84,209	179,456	175,074	95.2%	183,814					
21	CNO	Chino, CA	20,964	581	39,097	7,755	106,344	167,033	174,741	99.6%	175,527					
22	TMB	Kendall-Tamiami Executive Airport, FL	18,156	210	88,943	2,973	62,565	172,058	172,847	98.5%	175,494					
23	CHD	Chandler Municipal Airport	1,626	13	59,265	5,475	98,068	161,589	164,447	97.9%	167,920					
24	PDK	Dekalb-Peachtree Airport, GA	50,158	239	57,368	15,451	32,978	154,784	156,194	90.8%	172,037					
25	IWA	Williams Gateway Airport, AZ	4,608	164	53,163	7,396	89,826	171,200	155,157	85.9%	180,709					
26	FXE	Fort Lauderdale Executive Airport, FL	34,818	390	78,186	12,799	23,662	150,197	149,855	91.1%	164,437					
27	DTO	Denton Municipal Airport, TX	7,786	10	56,594	2,615	82,735	148,031	149,740	99.4%	150,659					
28	VRB	Vero Beach Municipal Airport, FL	20,548	362	51,153	2,953	74,556	149,915	149,572	97.6%	153,261					
29	BED	Laurence G Hanscom Field Airport, MA	30,754	269	49,491	5,920	60,264	162,999	146,698	85.9%	170,815					
30	PUB	Pueblo Memorial Airport, CO	6,868	98	63,115	1,247	74,979	155,881	146,307	91.7%	159,620					
31	SDL	Scottsdale Airport, AZ	24,060	176	49,244	15,434	54,820	141,640	143,534	90.2%	159,050					
32	HWO	North Perry Airport, FL	2,815	288	47,355	5,421	85,037	136,104	140,916	99.2%	142,034					
33	VGT	North Las Vegas Airport, NV	11,279	286	47,317	3,933	77,502	148,728	140,317	90.8%	154,581					
34	LVK	Livermore Municipal Airport, CA	9,394	14	45,391	2,840	81,883	137,491	139,522	99.4%	140,369					
35	CRQ	McClellan-Palomar Airport, CA	32,254	307	57,044	5,033	44,293	143,670	138,931	91.5%	151,920					
36	CMA	Camarillo Airport, CA	13,315	5,037	54,397	4,197	61,619	133,403	138,565	94.1%	147,203					
37	TOA	Torrance (Zamperini Field), CA	8,917	297	54,369	10,599	64,019	129,029	138,201	98.3%	140,608					
38	PMP	Pompano Beach Airpark, FL	4,162	6,522	33,623	12,174	80,316	118,466	136,797	98.2%	139,309					
39	GYR	Phoenix Goodyear Airport, AZ	761	336	52,413	3,351	79,391	138,606	136,252	95.0%	143,388					
40	RHV	Reid-Hillview, CA	2,706	4,709	43,453	3,884	80,912	128,097	135,664	80.1%	169,448					
41	FPR	Saint Lucie Country Int'l Airport, FL	21,075	249	45,614	3,197	65,458	133,563	135,593	98.9%	137,152					
42	OMN	Ormond Beach Municipal Airport, FL	7,839	192	60,707	713	63,397	132,026	132,848	99.8%	133,060					
43	HPN	Westchester County Airport, NY	43,645	170	62,282	1,374	24,037	194,732	131,508	66.7%	197,037					
44	EVB	New Smyrna Beach Municipal, FL	5,534	39	36,359	2,716	86,844	129,045	131,492	99.7%	131,885					
45	ISM	Kissimmee Gateway Airport, FL	19,055	-	47,707	6,096	52,057	120,962	124,915	97.4%	128,269					
46	SMO	Santa Monica, CA	17,816	27	45,122	18,635	40,875	110,769	122,475	94.5%	129,570					
47	SQL	San Carlos Airport, CA	3,502	179	47,629	15,486	54,109	106,135	120,905	98.1%	123,233					
48	SSF	Stinson Municipal Airport, TX	4,436	150	41,301	1,519	72,543	127,134	119,949	93.0%	128,911					
49	SGJ	Saint Augustine, FL	10,767	15	47,879	1,782	57,887	126,094	118,330	91.9%	128,692					
50	MRI	Merril Field Airport, AK	1,601	203	54,145	1,769	59,102	127,632	116,820	89.3%	130,779					

General Aviation operations are defined by the FAA based on traffic operations counted in the ATADS.

Total operations include general aviation operations as well as commercial and military operations. GA does not include FAR Part 135 on-demand operations.

Source: FAA Air Traffic Activity Data System (ATADS)

#### 4.5 Airports by European Country (2002-2006 Estimates)

Country	Albania	Andorra	Austria	Belgium	Bosnia-Herz.	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Lavia	Liechtenstein
<b>Airports with Paved Runways</b>	3	-	24	25	8	132	23	13	44	28	14	75	281	331	66	18	5	15	96	27	-
Over 10,000 ft	-	-	1	6	-	1	2	-	2	2	1	2	13	13	5	2	1	1	6	-	-
8,000 ft to 10,000 ft	3	-	5	8	4	19	6	7	9	7	8	27	28	51	16	8	-	1	32	7	-
5,000 ft to 8,000 ft	-	-	1	3	1	15	2	2	14	4	1	10	95	62	19	4	3	4	16	2	-
3,000 ft to 5,000 ft	-	-	3	1	-	1	4	3	2	12	3	23	82	71	17	3	1	3	30	2	-
Under 3,000 ft	-	-	14	7	3	96	9	1	17	3	1	13	63	134	9	1	-	6	12	16	-
<b>Airports with Unpaved Runways</b>	8	-	31	18	19	85	45	3	76	69	15	73	195	219	16	26	93	21	38	24	-
Over 10,000 ft	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
8,000 ft to 10,000 ft	-	-	-	-	-	2	-	-	-	-	1	-	-	1	-	2	-	-	-	1	-
5,000 ft to 8,000 ft	2	-	1	-	1	-	1	1	1	-	3	-	3	2	-	4	3	-	2	2	-
3,000 ft to 5,000 ft	1	-	3	2	7	11	7	-	27	6	4	4	72	31	3	11	29	4	18	1	-
Under 3,000 ft	4	-	27	16	11	72	37	2	48	63	6	69	120	185	13	9	61	17	18	20	-
<b>Heliports</b>	1	-	1	1	5	4	2	10	2	-	-	-	3	34	8	5	-	-	4	-	-

Country	Lithuania	Luxembourg	Netherlands	Norway	Macedonia	Malta	Monaco	Montenegro	Poland	Portugal	Romania	Serbia	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom	Europe Total	United States Total
<b>Airports with Paved Runways</b>	28	1	1	65	10	1	-	3	84	42	25	16	17	6	95	154	42	89	334	2,241	5,128
Over 10,000 ft	4	1	1	-	-	1	-	-	3	5	4	2	2	1	15	3	3	15	8	126	188
8,000 ft to 10,000 ft	1	-	-	13	2	-	-	1	30	9	9	4	2	1	10	12	5	33	33	411	221
5,000 ft to 8,000 ft	7	-	-	12	-	-	-	2	40	3	12	4	3	1	19	82	10	19	150	622	1,375
3,000 ft to 5,000 ft	2	-	-	14	-	-	-	-	8	15	-	2	3	2	23	22	8	18	86	464	2,383
Under 3,000 ft	14	-	-	26	8	-	-	-	3	10	-	4	7	1	28	35	16	4	57	618	961
<b>Airports with Unpaved Runways</b>	74	1	1	36	7	-	-	2	39	23	36	23	17	8	51	100	23	28	137	1,680	9,729
Over 10,000 ft	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	1
8,000 ft to 10,000 ft	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	9	7
5,000 ft to 8,000 ft	2	-	-	-	-	-	-	-	4	-	2	2	1	2	2	-	-	2	1	44	160
3,000 ft to 5,000 ft	5	-	-	7	3	-	-	1	13	1	10	9	9	2	5	10	-	8	23	347	1,718
Under 3,000 ft	67	1	1	29	4	-	-	1	21	22	24	12	7	4	44	90	23	17	112	1,277	7,843
<b>Heliports</b>	-	1	1	1	-	-	1	-	3	-	1	4	1	-	8	2	2	18	11	134	155

Source: CIA World Factbook



# 05

Forecast  
Information

## 5.1 FAA Forecast - U.S. General Aviation and On-Demand FAR Part 135 Aircraft

As of Dec. 31	Fixed Wing				Rotorcraft		Experimental	Light Sport Aircraft	Other	Total General Aviation Fleet
	Piston		Turbine		Piston	Turbine				
	Single Engine	Multi-Engine	Turbo Prop	Turbo Jet						
<b>Historical</b>										
2000	149,422	21,091	5,762	7,001	2,680	4,470	20,407	NA	6,700	217,533
2001	145,034	18,192	6,596	7,787	2,292	4,491	20,421	NA	6,633	211,446
2002	143,503	17,483	6,841	8,355	2,351	4,297	21,936	NA	6,478	211,244
2003	143,265	17,491	7,689	7,997	2,123	4,403	20,550	NA	6,088	209,606
2004	146,613	18,469	8,379	9,298	2,315	5,506	22,800	NA	5,939	219,319
2005	148,101	19,504	7,938	9,823	3,039	5,689	23,627	170	6,454	224,345
2006	145,033	18,708	8,061	10,379	3,264	5,895	23,047	1,273	6,277	221,937
2007	147,571	19,335	9,514	10,385	2,769	6,798	23,228	6,066	5,940	231,606
2008	145,497	17,519	8,907	11,042	3,498	6,378	23,364	6,811	5,652	228,668
2009	140,649	16,475	9,098	11,268	3,499	6,485	24,419	6,547	5,480	223,920
2010E	139,818	16,322	9,225	11,568	3,580	6,585	24,591	6,996	5,487	224,172
<b>Forecast</b>										
2011	139,010	16,170	9,340	11,925	3,685	6,735	24,685	7,430	5,495	224,475
2012	138,245	16,015	9,440	12,405	3,795	6,885	25,070	7,955	5,490	225,300
2013	137,590	15,870	9,560	12,945	3,910	7,045	25,630	8,405	5,485	226,440
2014	137,105	15,740	9,685	13,510	4,030	7,215	26,185	8,745	5,480	227,695
2015	136,760	15,595	9,820	14,110	4,165	7,405	26,740	9,070	5,475	229,140
2016	136,535	15,455	9,955	14,740	4,305	7,605	27,215	9,370	5,470	230,650
2017	136,425	15,305	10,090	15,390	4,450	7,810	27,600	9,670	5,465	232,205
2018	136,415	15,165	10,230	16,065	4,595	8,015	27,985	9,970	5,460	233,900
2019	136,540	15,030	10,365	16,755	4,740	8,220	28,375	10,270	5,455	235,750
2020	136,830	14,895	10,505	17,465	4,890	8,430	28,760	10,570	5,450	237,795
2021	137,305	14,755	10,650	18,195	5,040	8,640	29,145	10,870	5,445	240,045
2022	137,850	14,630	10,800	18,950	5,195	8,855	29,530	11,170	5,445	242,425
2023	138,490	14,505	10,950	19,745	5,350	9,070	29,920	11,470	5,440	244,940
2024	139,285	14,385	11,105	20,575	5,505	9,285	30,305	11,770	5,435	247,650
2025	140,240	14,265	11,260	21,445	5,660	9,500	30,690	12,070	5,430	250,560
2026	141,160	14,150	11,425	22,350	5,815	9,720	31,075	12,370	5,425	253,490
2027	142,225	14,035	11,590	23,295	5,970	9,940	31,465	12,670	5,420	256,610
2028	143,435	13,920	11,760	24,270	6,125	10,160	31,850	12,970	5,415	259,905
2029	144,780	13,810	11,930	25,285	6,280	10,380	32,235	13,270	5,415	263,385
2030	146,290	13,700	12,100	26,325	6,435	10,600	32,625	13,570	5,410	267,055
2031	147,960	13,590	12,280	27,395	6,590	10,820	33,010	13,870	5,405	270,920
<b>Avg. Annual Growth</b>	<b>0.3%</b>	<b>-0.9%</b>	<b>1.4%</b>	<b>4.2%</b>	<b>2.9%</b>	<b>2.4%</b>	<b>1.4%</b>	<b>3.3%</b>	<b>-0.1%</b>	<b>0.9%</b>

E = Estimated

Source: FAA 2011-2031 Aerospace Forecast

Historical data is from 2000-2009, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

## 5.2 FAA Forecast - U.S. General Aviation and On-Demand FAR Part 135 Aircraft Hours Flown (in Thousands)

As of Dec. 31	Fixed Wing				Rotorcraft		Experimental	Light Sport Aircraft	Other	Total General Aviation Fleet
	Piston		Turbine		Piston	Turbine				
	Single Engine	Multi-Engine	Turboprop	Turbojet						
<b>Historical</b>										
2000	18,089	3,400	1,986	2,755	530	1,661	1,307	NA	374	30,102
2001	16,549	2,644	1,773	2,654	474	1,478	1,157	NA	287	27,016
2002	16,325	2,566	1,850	2,745	453	1,422	1,345	NA	333	27,039
2003	16,680	2,317	1,922	2,704	448	1,687	1,293	NA	264	27,315
2004	15,363	2,763	2,161	3,719	514	2,020	1,322	NA	249	28,111
2005	13,739	2,677	2,160	3,767	678	2,438	1,340	9	271	27,078
2006	13,976	2,550	2,162	4,077	918	2,528	1,218	66	211	27,705
2007	13,571	2,686	2,661	3,938	704	2,541	1,275	260	215	27,852
2008	12,746	2,328	2,457	3,600	751	2,470	1,155	293	209	26,009
2009	11,732	1,904	2,225	3,161	755	2,248	1,286	282	178	23,771
2010E	11,474	1,904	2,493	3,455	757	2,237	1,252	301	177	24,051
<b>Forecast</b>										
2011	11,449	1,845	2,538	3,595	781	2,300	1,289	326	178	24,301
2012	11,362	1,821	2,576	4,233	807	2,363	1,374	356	179	25,071
2013	11,248	1,821	2,609	4,780	833	2,430	1,489	384	180	25,772
2014	11,084	1,783	2,651	5,012	861	2,501	1,605	407	181	26,084
2015	10,936	1,728	2,680	5,250	892	2,579	1,721	431	181	26,398
2016	10,827	1,690	2,695	5,512	924	2,662	1,786	454	182	26,732
2017	10,796	1,664	2,712	5,763	958	2,748	1,830	478	183	27,130
2018	10,797	1,640	2,740	6,001	991	2,834	1,874	502	184	27,563
2019	10,835	1,618	2,767	6,258	1,025	2,921	1,910	528	184	28,046
2020	10,919	1,608	2,800	6,530	1,060	3,011	1,945	554	185	28,614
2021	11,036	1,592	2,827	6,803	1,095	3,101	1,981	581	186	29,203
2022	11,192	1,587	2,865	7,077	1,132	3,194	2,017	609	187	29,861
2023	11,388	1,589	2,907	7,369	1,169	3,288	2,054	638	188	30,589
2024	11,642	1,593	2,945	7,677	1,206	3,383	2,091	668	188	31,393
2025	11,942	1,603	2,983	7,997	1,243	3,478	2,128	699	189	32,261
2026	12,235	1,617	3,027	8,326	1,280	3,577	2,166	730	190	33,148
2027	12,533	1,631	3,071	8,666	1,317	3,676	2,204	763	191	34,052
2028	12,815	1,650	3,112	9,017	1,355	3,776	2,242	797	192	34,955
2029	13,090	1,671	3,154	9,391	1,392	3,877	2,280	832	192	35,881
2030	13,405	1,683	3,199	9,781	1,430	3,979	2,319	867	193	36,858
2031	13,699	1,693	3,250	10,178	1,469	4,082	2,359	904	194	37,828
<b>Avg. Annual Growth</b>	<b>0.8%</b>	<b>-0.6%</b>	<b>1.3%</b>	<b>5.3%</b>	<b>3.2%</b>	<b>2.9%</b>	<b>3.1%</b>	<b>5.4%</b>	<b>0.4%</b>	<b>2.2%</b>

E = Estimated

Source: FAA 2011-2031 Aerospace Forecast

Historical data is from 2000-2009, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.

### 5.3 FAA Forecast - U.S. General Aviation and On-Demand FAR Part 135 Aircraft Fuel Consumption (in Millions of Gallons)

As of Dec. 31	Fixed Wing				Rotorcraft		Experimental	Light Sport Aircraft	Total Fuel Consumed		
	Piston		Turbine		Piston	Turbine			AvGas	Jet Fuel	Total
	Single Engine	Multi-Engine	Turboprop	Turbojet							
<b>Historical</b>											
2000	200.8	108.4	176.3	736.7	8.4	59.0	15.2	NA	332.8	972.0	1,304.8
2001	180.4	76.4	149.1	726.7	7.2	42.6	15.3	NA	279.2	918.4	1,197.6
2002	177.9	74.2	152.3	745.5	6.9	40.5	17.8	NA	276.7	938.3	1,215.0
2003	181.8	66.7	154.5	729.0	6.8	48.8	17.1	NA	272.4	932.3	1,204.7
2004	167.5	80.1	167.0	1,004.9	7.9	59.0	17.5	NA	272.9	1,230.9	1,503.8
2005	173.1	89.7	196.1	1,181.3	14.6	149.2	17.7	0.0	295.0	1,526.7	1,821.7
2006	164.9	79.9	190.1	1,303.9	16.7	148.6	21.6	0.3	283.4	1,642.6	1,926.0
2007	157.6	83.0	205.2	1,148.0	9.3	132.4	22.6	1.2	273.6	1,485.6	1,759.2
2008	143.0	69.5	230.4	1,313.2	10.7	162.1	23.3	1.5	248.1	1,705.7	1,953.8
2009	132.3	57.1	208.7	1,104.6	10.7	133.6	25.8	1.4	227.4	1,447.0	1,674.4
2010E	130.0	57.4	192.7	1,131.4	11.1	108.3	20.5	1.3	220.4	1,432.4	1,652.9
<b>Forecast</b>											
2011	130.4	55.9	196.2	1,165.5	11.5	110.7	21.1	1.4	220.4	1,472.5	1,692.8
2012	128.1	54.6	199.2	1,358.8	11.8	113.2	22.4	1.6	218.5	1,671.1	1,889.6
2013	125.6	54.1	199.7	1,518.9	12.2	115.8	24.3	1.6	217.8	1,834.4	2,052.1
2014	122.5	52.4	202.9	1,576.6	12.6	118.6	26.2	1.8	215.4	1,898.2	2,113.6
2015	119.6	50.3	205.1	1,635.1	13.0	121.8	27.9	1.9	212.7	1,961.9	2,174.6
2016	117.9	49.0	204.2	1,699.4	13.4	125.0	29.0	2.0	211.2	2,028.6	2,239.9
2017	116.9	47.9	205.5	1,759.0	13.9	128.4	29.7	2.1	210.6	2,092.9	2,303.5
2018	116.4	47.0	207.6	1,813.6	14.4	131.8	30.3	2.2	210.2	2,153.0	2,363.1
2019	116.2	46.2	207.5	1,872.4	14.8	135.1	30.8	2.2	210.3	2,215.1	2,425.3
2020	116.5	45.7	210.0	1,934.2	15.4	138.6	31.4	2.3	211.3	2,282.9	2,494.1
2021	117.2	45.0	212.0	1,994.9	15.9	142.0	32.0	2.4	212.4	2,348.9	2,561.4
2022	118.2	44.6	212.8	2,054.4	16.3	145.6	32.4	2.5	214.1	2,412.7	2,626.8
2023	119.7	44.4	215.8	2,117.8	16.8	149.1	33.0	2.6	216.6	2,482.7	2,699.3
2024	121.8	44.3	218.7	2,184.1	17.4	152.6	33.6	2.7	219.8	2,555.4	2,775.2
2025	124.3	44.4	221.5	2,252.4	17.9	156.2	34.2	2.9	223.6	2,630.1	2,853.7
2026	126.7	44.5	224.8	2,321.6	18.4	159.8	34.8	3.0	227.5	2,706.2	2,933.6
2027	129.1	44.7	228.0	2,392.5	19.0	163.4	35.4	3.1	231.3	2,783.9	3,015.3
2028	131.4	45.0	231.1	2,464.4	19.5	167.0	36.0	3.3	235.2	2,862.5	3,097.7
2029	133.5	45.3	234.2	2,541.0	20.1	170.6	36.7	3.4	239.0	2,945.8	3,184.8
2030	136.0	45.4	237.6	2,620.0	20.6	174.2	37.3	3.6	242.9	3,031.8	3,274.7
2031	138.3	45.5	241.4	2,699.1	21.2	177.8	37.9	3.7	246.6	3,118.3	3,364.9
<b>Avg. Annual Growth</b>	<b>0.3%</b>	<b>-1.1%</b>	<b>1.1%</b>	<b>4.2%</b>	<b>3.1%</b>	<b>2.4%</b>	<b>3.0%</b>	<b>5.0%</b>	<b>0.5%</b>	<b>3.8%</b>	<b>3.4%</b>

E = Estimated

Source: FAA 2011-2031 Aerospace Forecast

## 5.4 FAA Forecast - U.S. Pilot Population

As of Dec. 31	Students	Recreational	Sport Pilot	Private	Commercial	Airline Transport Pilot	Rotorcraft Only	Glider Only	Total Pilots
<b>Historical</b>									
2000	93,064	340	NA	251,561	121,858	141,596	7,775	9,387	625,581
2001	94,420	316	NA	243,823	120,502	144,702	7,727	8,473	619,963
2002	85,991	317	NA	245,230	125,920	144,708	7,770	21,826	609,936
2003	87,296	310	NA	241,045	123,990	143,504	7,916	20,950	625,011
2004	87,910	291	NA	235,994	122,592	142,160	8,586	21,100	618,633
2005	87,213	278	134	228,619	120,614	141,992	9,518	21,369	609,737
2006	84,866	239	939	219,233	117,610	141,935	10,690	21,597	597,109
2007	84,339	239	2,031	211,096	115,127	143,953	12,290	21,274	590,349
2008	80,989	252	2,623	222,596	124,746	146,838	14,647	21,055	613,746
2009	72,280	234	3,248	211,619	125,738	144,600	15,298	21,268	594,285
2010E	119,119	212	3,682	202,020	123,705	142,198	15,377	21,275	627,588
<b>Forecast</b>									
2011	115,000	210	4,350	195,650	123,900	142,650	15,540	21,360	618,660
2012	111,700	210	5,050	190,600	122,350	143,550	15,850	21,400	610,710
2013	110,750	210	5,350	189,550	122,100	144,950	16,410	21,440	610,760
2014	109,700	210	5,650	188,350	121,800	146,000	16,960	21,470	610,140
2015	109,450	210	5,950	188,500	120,950	147,100	17,470	21,510	611,140
2016	109,250	210	6,250	188,750	120,500	147,950	18,000	21,540	612,450
2017	109,300	210	6,600	189,400	121,000	148,650	18,530	21,580	615,270
2018	109,450	210	6,950	190,250	121,250	149,450	18,960	21,610	618,130
2019	109,650	210	7,300	191,150	121,750	150,200	19,300	21,650	621,210
2020	110,050	210	7,700	192,400	122,300	151,050	19,450	21,680	624,840
2021	110,550	210	8,050	193,600	123,000	152,100	19,430	21,710	628,650
2022	111,150	210	8,450	194,950	123,750	153,000	19,400	21,770	632,680
2023	111,800	210	8,850	196,400	124,650	153,950	19,340	21,800	637,000
2024	112,550	210	9,250	198,000	125,700	154,900	19,270	21,840	641,720
2025	113,500	210	9,700	200,000	126,900	155,900	19,330	21,870	647,410
2026	114,350	210	10,150	201,800	128,200	157,050	19,490	21,910	653,160
2027	115,350	210	10,650	203,900	129,600	158,150	19,710	21,940	659,510
2028	116,500	210	11,150	206,250	131,150	159,350	19,980	21,970	666,560
2029	117,750	210	11,700	208,800	132,800	160,550	20,320	22,030	674,160
2030	119,100	210	12,250	211,500	134,450	161,850	20,710	22,060	682,130
2031	120,600	210	12,850	214,500	136,300	163,150	21,100	22,100	690,810
<b>Avg. Annual Growth</b>	<b>0.1%</b>	<b>0.0%</b>	<b>6.1%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>0.7%</b>	<b>1.5%</b>	<b>0.2%</b>	<b>0.5%</b>

E = Estimated

Source: FAA 2011-2031 Aerospace Forecast

Except for sport pilots, an active pilot is a person with a pilot certificate with a valid medical certificate.

In March 2001, the FAA changed the definition of glider pilot only. This added approximately 13,000 to this pilot category in 2002.

In July 2010, the FAA issued a rule that increased the duration of validity for student pilot certificates for pilots under the age of 40 from 36 to 60 months. This resulted in the increase in active student pilots to 119,119 from 72,280 at the end of 2009.





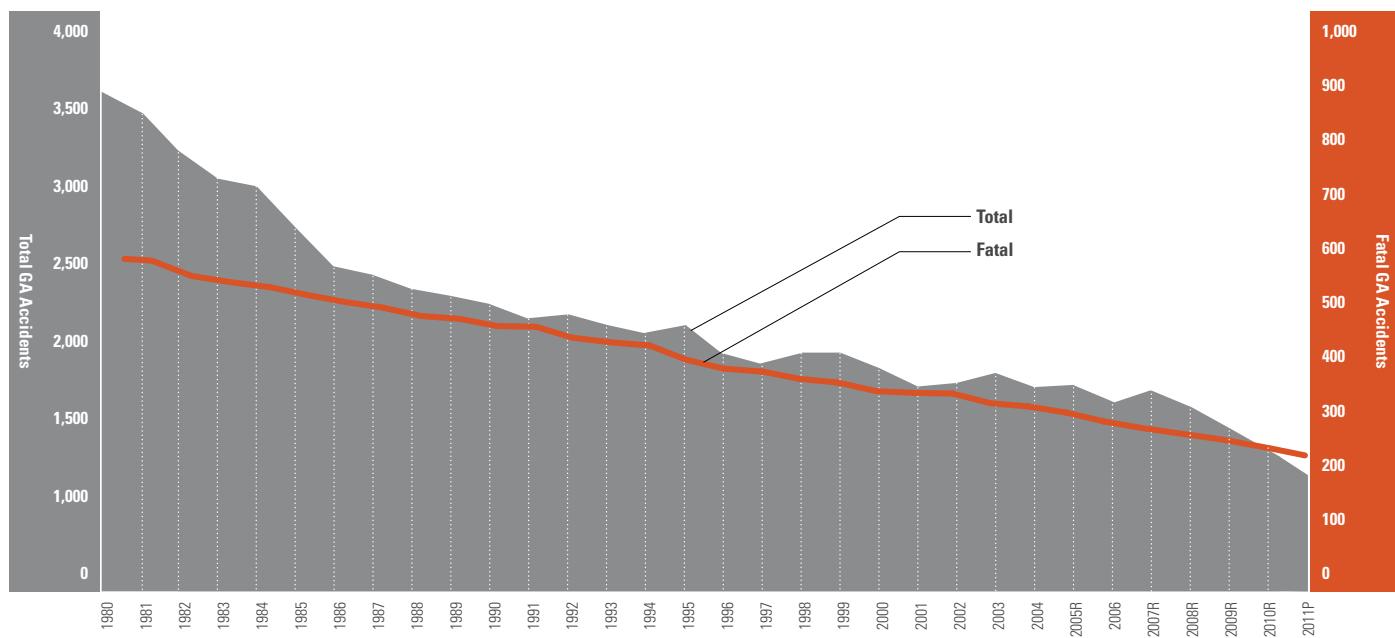
# 06

General Aviation  
Safety Data

## 6.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1938-2011) (CONTINUED ON NEXT PAGE)

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1938	1,861	*	176	*	*	*	1,478,000	125.90	11.90
1939	2,222	*	203	*	*	*	1,922,000	115.60	10.60
1940	3,471	*	232	*	*	*	3,202,000	108.40	7.30
1941	4,252	*	217	*	*	*	4,462,000	95.30	4.90
1942	3,324	*	143	*	*	*	3,790,000	87.70	3.80
1943	3,871	*	167	*	*	*	*	*	*
1944	3,343	*	169	*	*	*	*	*	*
1945	4,652	*	322	*	*	*	*	*	*
1946	7,618	*	690	*	*	*	9,792,000	77.80	7.00
1947	9,253	*	882	*	*	*	16,348,000	56.60	5.30
1948	7,850	*	850	*	*	*	15,154,000	51.80	5.60
1949	5,459	*	562	*	*	*	11,051,000	49.40	5.00
1950	4,505	*	499	*	*	*	9,667,000	46.60	5.10
1951	3,824	*	441	*	*	*	8,460,000	45.20	5.20
1952	3,657	*	401	*	*	*	8,200,000	44.60	4.80
1953	3,232	*	387	*	*	*	8,528,000	37.90	4.50
1954	3,381	*	393	*	*	*	8,968,000	37.70	4.30
1955	3,343	*	384	*	*	*	9,524,000	35.10	4.00
1956	3,474	*	356	*	*	*	10,218,000	34.00	3.40
1957	4,200	*	438	*	*	*	10,938,000	38.40	4.00
1958	4,584	*	384	*	*	*	12,593,000	36.40	3.10
1959	4,576	*	450	*	*	*	12,890,000	35.50	3.50
1960	4,793	*	429	*	*	*	13,132,000	36.50	3.27
1961	4,625	*	426	*	*	*	13,603,000	34.00	3.13
1962	4,840	*	430	*	*	*	14,491,000	33.40	2.97
1963	4,690	*	482	*	*	*	15,129,000	31.00	3.19
1964	5,069	*	526	*	*	*	15,742,000	32.20	3.34
1965	5,196	*	538	*	*	*	16,707,000	31.10	3.22
1966	5,712	*	573	*	*	*	21,000,000	27.20	2.73
1967	6,115	*	603	*	*	*	22,156,000	27.60	2.72
1968	4,968	*	692	*	*	*	24,117,000	20.60	2.86
1969	4,767	*	647	*	*	*	25,356,000	18.80	2.55
1970	4,712	*	641	*	*	*	26,033,000	18.10	2.46
1971	4,648	*	661	*	*	*	25,538,000	18.20	2.59
1972	4,256	*	695	*	*	*	26,937,000	15.80	2.67
1973	4,255	*	723	*	*	*	29,965,000	14.20	2.52
1974	4,234	*	689	*	*	*	27,855,000	15.20	2.47

FIGURE 6.1 Total Accidents and Fatal Accidents in U.S. General Aviation (1980-2011)



P = Preliminary, R = Revised

## 6.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1938-2011) (CONTINUED FROM PREVIOUS PAGE)

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1975	4,001	*	636	*	*	*	28,784,000	13.90	2.20
1976	4,023	*	662	*	*	*	30,477,000	13.20	2.16
1977	4,083	*	663	*	*	*	31,651,000	12.90	2.09
1978	4,218	*	721	*	*	*	34,860,000	12.10	2.06
1979	3,625	*	636	*	*	*	36,690,000	9.88	1.63
1980	3,597	*	622	*	*	*	36,481,000	9.86	1.69
1981	3,502	*	654	*	*	*	36,824,000	9.51	1.78
1982	3,233	*	591	*	1187	1170	29,840,000	10.91	1.99
1983	3,075	15	555	5	1068	1061	28,673,000	10.67	1.92
1984	3,017	26	545	11	1042	1021	29,099,000	10.28	1.84
1985	2,739	11	498	6	956	945	28,322,000	9.63	1.73
1986	2,581	11	474	5	967	879	27,073,000	9.49	1.73
1987	2,495	18	446	7	837	822	26,972,000	9.18	1.62
1988	2,388	13	460	4	797	792	27,446,000	8.65	1.66
1989	2,242	17	432	8	769	766	27,920,000	7.97	1.52
1990	2,242	4	444	1	770	765	28,510,000	7.85	1.55
1991	2,197	8	439	5	800	786	27,678,000	7.91	1.57
1992	2,110	2	450	1	866	864	24,780,000	8.51	1.81
1993	2,064	5	401	4	744	740	22,796,000	9.03	1.74
1994	2,021	3	404	2	730	723	22,235,000	9.08	1.81
1995	2,055	10	412	6	734	727	24,906,000	8.21	1.63
1996	1,908	4	361	0	636	619	24,881,000	7.65	1.45
1997	1,840	5	350	2	631	625	25,591,000	7.17	1.36
1998	1,902	6	364	4	624	618	25,518,000	7.43	1.41
1999	1,905	3	340	1	621	615	29,246,000	6.50	1.16
2000	1,837	7	345	7	596	585	27,838,000	6.57	1.21
2001	1,727	3	325	1	562	558	25,431,000	6.78	1.27
2002	1,715	7	345	6	581	575	25,545,000	6.69	1.33
2003	1,741	4	352	3	633	630	25,998,000	6.68	1.34
2004	1,617	3	314	0	559	559	24,888,000	6.49	1.26
2005R	1,671	2	321	1	563	558	23,168,000	7.20	1.38
2006	1,523	2	308	1	706	547	23,963,000	6.35	1.28
2007R	1,651	2	288	2	496	491	23,819,000	6.92	1.20
2008R	1,569	2	275	0	494	485	22,805,000	6.87	1.21
2009R	1,480	2	275	0	478	469	20,862,000	7.08	1.32
2010R	1,435	0	267	0	450	447	21,689,000	6.61	1.23
2011P	1,382	*	254	*	*	*	*	*	*

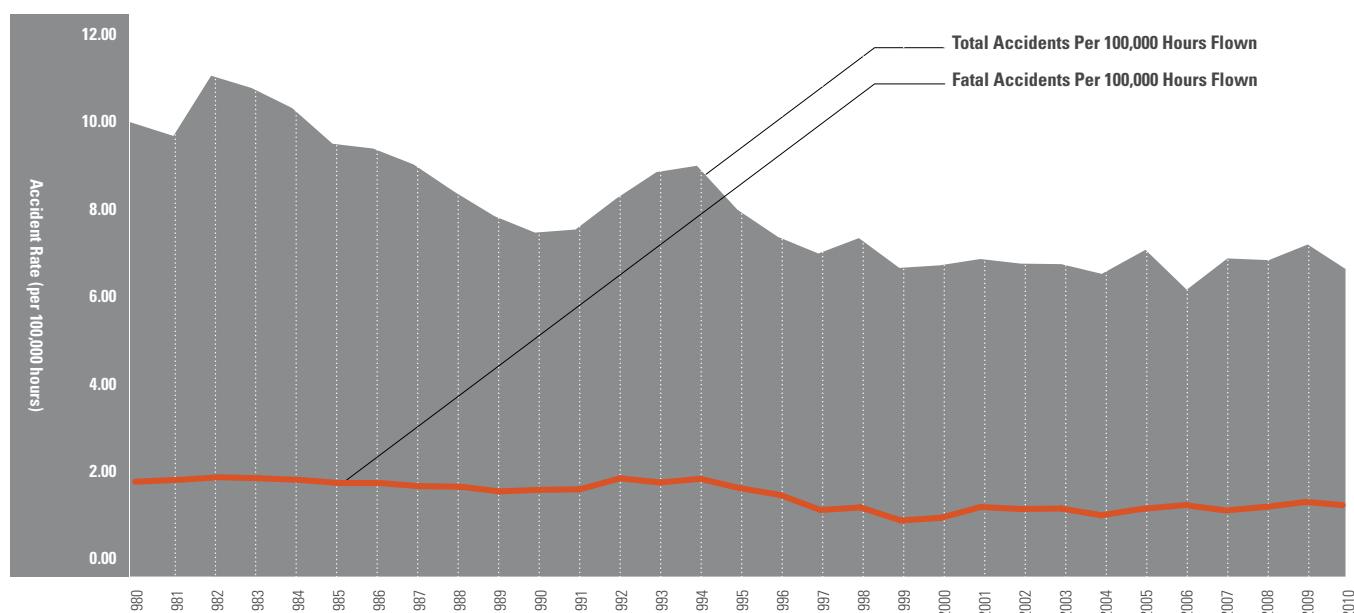
P = Preliminary, R = Revised since previous NTSB annual update.

General Aviation as defined by NTSB includes operations under Part 91, Part 91K, Part 125, Part 133 and Part 137 for the purpose of accident statistics.

Excluded "Accidents" and "Fatalities" are suicide/sabotage and stolen/unauthorized events, which are not included in rates.

Source: NTSB, FAA, and GAMA

**FIGURE 6.2** Accident Rates in U.S. General Aviation (1980-2010)



## 6.2 U.S. On-Demand FAR Part 135 Accidents, Fatal Accidents, and Fatalities (1987-2011)

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1987	96	*	30	*	65	63	2,657,000	3.61	<b>1.13</b>
1988	102	*	28	*	59	55	2,632,000	3.88	<b>1.06</b>
1989	110	*	25	*	83	81	3,020,000	3.64	<b>0.83</b>
1990	107	*	29	*	51	49	2,249,000	4.76	<b>1.29</b>
1991	88	*	28	*	78	74	2,241,000	3.93	<b>1.25</b>
1992	76	*	24	*	68	65	2,844,000	2.67	<b>0.84</b>
1993	69	*	19	*	42	42	2,324,000	2.97	<b>0.82</b>
1994	85	*	26	*	63	62	2,465,000	3.45	<b>1.05</b>
1995	75	*	24	*	52	52	2,486,000	3.02	<b>0.97</b>
1996	90	*	29	*	63	63	3,220,000	2.80	<b>0.90</b>
1997	82	*	15	*	39	39	3,098,000	2.65	<b>0.48</b>
1998	77	*	17	*	45	41	3,802,000	2.03	<b>0.45</b>
1999	74	*	12	*	38	38	3,204,000	2.31	<b>0.37</b>
2000	80	*	22	*	71	68	3,930,000	2.04	<b>0.56</b>
2001	72	*	18	*	60	59	2,997,000	2.40	<b>0.60</b>
2002	60	*	18	*	35	35	2,911,000	2.06	<b>0.62</b>
2003	73	*	18	*	42	40	2,927,000	2.49	<b>0.61</b>
2004	66	*	23	*	64	63	3,238,000	2.04	<b>0.71</b>
2005	65	*	11	*	18	16	3,815,000	1.70	<b>0.29</b>
2006	52	*	10	*	16	16	3,742,000	1.39	<b>0.27</b>
2007	62	*	14	*	43	43	4,033,000	1.54	<b>0.35</b>
2008	58	*	20	*	69	69	3,205,000	1.81	<b>0.62</b>
2009	47	*	2	*	17	14	2,901,000	1.62	<b>0.07</b>
2010R	31	*	6	*	17	17	3,113,000	0.99	<b>0.19</b>
2011P	46	*	15	*	*	*	*	*	*

P = Preliminary, R = Revised

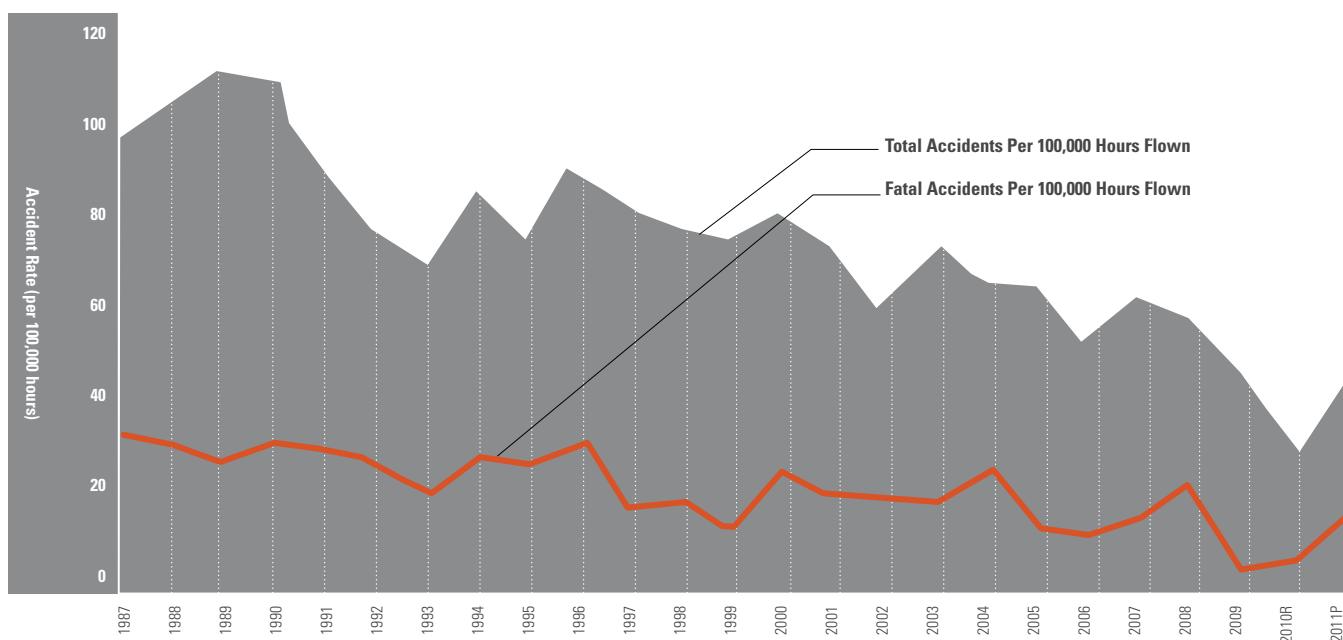
Excluded "Accidents" and "Fatalities" are suicide/sabotage and stolen/unauthorized events, which are not included in rates.

In 2002, FAA changed their estimate of air taxi activity. The revision was retroactively applied to the years 1992 to present. In 2003, the FAA again revised flight activity estimates for 1999 to 2002. See Table 9a for further details surrounding this revision.

U.S. air carriers operating under 14 CFR Part 135 were previously referred to as Scheduled and Nonscheduled Services. Current tables now refer to these same air carriers as Commuter Operations and On-Demand Operations, respectively, in order to be consistent with definitions in 14 CFR 119.3 and terminology used in 14 CFR 135.1. On-Demand Part 135 operations encompass charters, air taxis, air tours, or medical services (when a patient is on board).

Source: NTSB

**FIGURE 6.3** Accident Rates in U.S. On-Demand FAR Part 135 Operations (1987-2011)



### 6.3 European Union General Aviation and Aerial Work Accident Data (2006-2010)

Year	Aircraft with Mass Below 2,250 Kg				Aircraft with Mass Above 2,250 Kg				All Aircraft	
	Accidents		Fatalities		Accidents		Fatalities		Accidents	
	Total	Fatal	On Board	Ground	Total	Fatal	On Board	Ground	Total	Fatal
2006	1,121	151	231	3	36	10	29	-	1,157	<b>161</b>
2007	1,157	142	238	5	30	10	18	1	1,187	<b>152</b>
2008	1,145	140	216	2	32	10	23	1	1,177	<b>150</b>
2009	1,234	163	253	4	19	9	18	-	1,253	<b>172</b>
2010	1,047	129	189	1	31	6	14	-	1,078	<b>135</b>

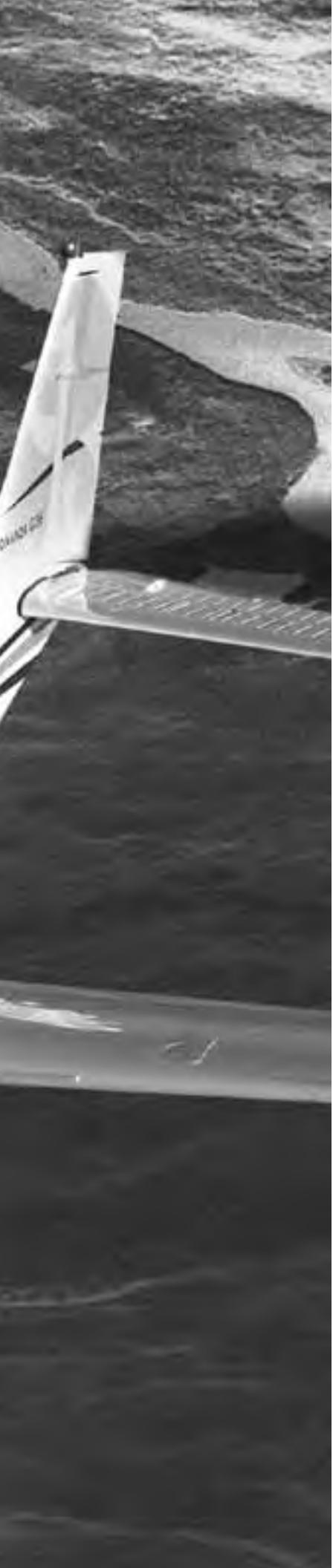
The European Aviation Safety Agency (EASA) includes aircraft registered in Member States that are balloon, aeroplane, glider, gyroplane, helicopter, microlight, motorgliders and other aircraft among general aviation accidents that occurred in general aviation operations and while conducting aerial work.

Data from 2006-2008 does not include Italy, Liechtenstein, Luxembourg and Slovenia.

Source: EASA  
Annual Safety  
Review







# 07

International GA  
Statistical Information

## 7.1 Australia – Number of General Aviation and Regional Aircraft by Category (1995-2010)

Year	Aircraft Type						Total	
	Amateur Built	Fixed Wing			Rotorcraft	Balloon & Airship		
		Single Engine	Multi Engine					
1995	*	6,787	1,779	739	243		9,548	
1996	*	6,861	1,799	739	266		9,665	
1997	*	6,994	1,803	768	284		9,849	
1998	*	7,137	1,783	791	295		10,006	
1999	*	7,247	1,743	868	310		10,168	
2000	*	7,302	1,755	743	325		10,125	
2001	673	6,680	1,736	979	334		10,402	
2002	707	6,668	1,706	1,038	336		10,455	
2003	789	6,727	1,696	1,121	338		10,671	
2004	848	6,794	1,718	1,194	350		10,904	
2005	896	6,908	1,733	1,292	351		11,180	
2006	910	6,838	1,730	1,320	319		11,117	
2007	968	6,955	1,804	1,481	333		11,541	
2008	1,037	7,180	1,871	1,619	338		12,045	
2009	1,071	7,230	1,885	1,703	340		12,229	
2010	1,111	7,375	1,932	1,800	346		12,564	

Prior to 2000, Amateur Built are included in Fixed Wing Single Engine

Source: Australia Dept. of Transportation and Regional Services, Bureau of Transport and Regional Economics, [www.btre.gov.au](http://www.btre.gov.au)

## 7.2 Australia – Hours Flown (in Thousands) in General Aviation by Flying Activity (1992-2010)

Year	General Aviation								Sport Aviation					Regional Airline	Total Hours
	Private	Business	Training	Agricul- tural	Aerial Work	Test & Ferry	Charter	Total GA	Ultra- light	Gliding	Hang Gliding	Gyro- planes	Total Sport		
1992	255.4	204.2	421.6	80.9	256.7	28.2	403.9	<b>1,650.9</b>	*	*	*	*	*	<b>223.4</b>	1,874.3
1993	265.3	212.3	436.8	89.2	278.8	28.2	393.4	<b>1,704.0</b>	*	*	*	*	*	<b>227.7</b>	1,931.7
1994	256.9	198.5	419.5	78.9	301.7	25.9	424.4	<b>1,705.8</b>	*	*	*	*	*	<b>238.3</b>	1,944.1
1995	251.0	189.1	430.6	94.5	302.4	28.2	465.7	<b>1,761.5</b>	*	*	*	*	*	<b>243.1</b>	2,004.6
1996	261.6	182.8	444.9	117.4	285.7	26.2	480.4	<b>1,799.0</b>	*	*	*	*	*	<b>246.2</b>	2,045.2
1997	266.7	176.0	449.5	128.4	307.4	27.6	483.7	<b>1,839.3</b>	*	*	*	*	*	<b>272.4</b>	2,111.7
1998	263.0	163.8	478.5	139.2	312.4	26.6	494.6	<b>1,878.1</b>	*	*	*	*	*	<b>273.2</b>	2,151.3
1999	275.9	153.3	448.8	126.3	306.6	26.6	504.6	<b>1,842.1</b>	*	*	*	*	*	<b>277.3</b>	2,119.4
2000	248.5	136.3	413.6	115.0	296.9	27.9	476.7	<b>1,714.9</b>	*	*	*	*	*	<b>335.7</b>	2,050.6
2001	261.7	144.9	406.2	106.7	294.2	23.2	466.0	<b>1,702.9</b>	*	*	*	*	*	<b>298.0</b>	2,000.9
2002	270.2	142.2	410.8	70.8	327.1	20.9	445.7	<b>1,687.7</b>	*	*	*	*	*	<b>250.1</b>	1,937.8
2003	239.7	143.4	420.3	69.7	322.5	21.2	429.2	<b>1,646.0</b>	*	*	*	*	*	<b>234.7</b>	1,880.7
2004	247.2	143.0	352.2	86.5	312.4	22.3	481.4	<b>1,645.0</b>	*	*	*	*	*	<b>251.4</b>	1,896.4
2005	239.2	149.1	415.8	95.0	318.8	22.3	482.6	<b>1,722.8</b>	*	*	*	*	*	<b>254.7</b>	1,977.5
2006	227.2	144.1	424.0	61.7	337.9	21.7	478.4	<b>1,695.0</b>	*	*	*	*	*	<b>241.5</b>	1,936.5
2007	222.7	153.4	455.4	62.1	368.0	25.7	544.5	<b>1,831.8</b>	*	*	*	*	*	<b>241.9</b>	2,073.7
2008	228.4	151.7	485.6	78.2	373.4	21.8	518.6	<b>1,857.7</b>	156.2	<b>169.9</b>	88.3	<b>30.5</b>	444.9	<b>214.7</b>	2,517.3
2009	239.5	148.5	497.1	73.3	363.1	16.4	469.7	<b>1,807.6</b>	174.3	<b>198.4</b>	96.0	<b>35.6</b>	504.3	<b>204.1</b>	2,516.0
2010	241.9	140.0	436.3	103.8	400.3	18.2	507.3	<b>1,847.7</b>	141.9	<b>228.7</b>	97.9	<b>44.4</b>	513.0	<b>228.1</b>	2,588.8

Data for "Sport Aviation" as a separate segment to "General Aviation" was introduced in 2008. The data is identified separately and included in the totals for 2008-2010.

Source: Australia Dept. of Transportation and Regional Services, Bureau of Transport and Regional Economics [www.infrastructure.gov.au](http://www.infrastructure.gov.au)

## 7.3 Austria - Number of General Aviation Aircraft by Type (2011)

	Aircraft Type								Total Aircraft	
	Airplanes				Helicopter					
	Below 1,999 kg	2,000 - 5,699 kg	Above 5,700kg	Motor Glider	Single Engine	Multi Engine	Gyroplane	Federal Aircraft		
2011	723	110	323	186	99	57	5	17	<b>1,520</b>	

Source: Austrocontrol at [www.austrocontrol.at](http://www.austrocontrol.at)

#### 7.4 Brazil – Number of Aircraft Registrations by Type (1996-2009)

Year	Aircraft Type								Total Aircraft	
	Airplanes			Other Aircraft						
	Piston Engine	Turboprop	Jet Turbine	Helicopter	Sailplane	Balloon	Dirigible	Experimental		
1996	7,987	1,013	462	547	302	4	*	*	10,315	
1997	8,055	1,111	488	649	304	4	*	*	10,611	
1998	8,172	1,182	513	749	306	4	1	*	10,927	
1999	8,273	1,192	497	791	307	4	1	3,152	14,217	
2000	8,333	1,218	500	841	308	4	1	3,348	14,553	
2001	8,412	1,260	542	897	309	3	1	3,513	14,937	
2002	8,445	1,303	579	940	310	3	1	3,684	15,265	
2003	8,496	1,323	560	955	316	3	1	3,882	15,536	
2004	8,604	1,348	559	981	316	3	1	4,069	15,881	
2005	8,718	1,361	596	989	316	3	1	4,286	16,270	
2006	8,798	1,399	603	1,011	309	3	1	3,001	15,125	
2007	8,909	1,488	647	1,097	303	3	1	3,225	15,673	
2008	9,164	1,617	773	1,194	299	3	1	3,525	16,576	
2009	9,354	1,700	820	1,255	3,000	3	1	3,632	19,765	

The experimental category includes ultra-lights, balloons, gyrocopters, sailplanes, motorpowered sailplanes, dirigibles, and experimental airplanes. From 2006, for statistical purposes, only re-registered ultra-lights were included.

Source: Agência Nacional de Aviação Civil (ANAC), Brazil www.anac.gov.br

#### 7.5 Canada – Number of Aircraft Registrations by Type and Weight Group (1980-2011)

Year	Number of Registered Aircraft by Type						By Weight Group		Total Aircraft
	Aeroplane	Ultralight	Helicopter	Glider	Balloon	Gyroplanes	<= 12,500 lbs	> 12,500 lbs	
1980	21,533	*	1,381	511	91	108	*	*	23,624
1981	22,199	*	1,476	528	124	110	*	*	24,437
1982	22,412	*	1,462	548	148	112	*	*	24,682
1983	22,354	1,282	1,410	560	177	116	*	*	25,899
1984	22,330	1,971	1,326	572	197	118	*	*	26,514
1985	22,231	2,376	1,276	582	219	117	*	*	26,801
1986	22,105	2,706	1,264	589	247	116	*	*	27,027
1987	22,270	2,946	1,299	602	279	121	*	*	27,517
1988	22,469	3,105	1,338	613	308	122	*	*	27,955
1989	22,463	3,212	1,366	614	339	127	*	*	28,121
1990	22,278	3,363	1,416	609	361	128	27,173	982	28,155
1991	21,973	3,477	1,433	601	384	135	23,553	981	28,003
1992	21,795	3,607	1,502	602	405	155	27,070	996	28,066
1993	21,452	3,744	1,533	597	424	162	26,977	935	27,912
1994	21,212	3,840	1,582	601	444	169	26,885	963	27,848
1995	21,169	3,956	1,605	601	440	166	26,914	1,023	27,937
1996	21,089	4,070	1,643	592	440	168	26,919	1,084	28,002
1997	20,985	4,208	1,655	587	450	169	26,862	1,192	28,054
1998	20,830	4,305	1,676	592	440	174	26,809	1,208	28,017
1999	20,768	4,346	1,711	596	444	182	26,783	1,264	28,047
2000	20,789	4,467	1,753	600	446	187	26,922	1,320	28,242
2001	20,851	4,584	1,798	613	456	191	27,171	1,322	28,493
2002	18,123	7,524	1,831	617	459	190	27,376	1,368	28,744
2003	18,085	7,817	1,894	674	453	189	27,752	1,360	29,112
2004	18,216	8,119	1,940	686	463	190	28,166	1,448	29,614
2005	18,407	8,463	2,019	683	479	193	28,745	1,499	30,244
2006	18,689	8,823	2,145	687	482	192	29,422	1,596	31,018
2007	19,070	9,125	2,317	695	486	193	30,223	1,663	31,886
2008	19,544	9,499	2,504	703	491	192	31,154	1,779	32,933
2009	19,744	9,823	2,576	715	484	191	31,709	1,824	33,533
2010	19,974	10,144	2,658	713	491	195	32,330	1,845	34,175
2011	20,186	11,044	2,728	720	495	199	32,986	1,961	34,947

Ultralights include basic ultra-light, advanced ultra-light, experimental, amateur-built and owner maintained.  
Balloons include airships and powered parachutes (e.g. 3 in 1992, 2 in 1993).

Gyroplanes include ornithopters.

Source: Transport Canada and Canadian Civil Aircraft Registry www.tc.gc.ca

## 7.6 France – Number of General Aviation Aircraft by Type (1990-2009)

Year	Activity at Aeroclubs													Total Aircraft	
	Airplanes			Gliders			Helicopters			Hand Gliders		Ultralight			
	Number of Aircraft	Hours Flown	Active Pilots	Number of Aircraft	Hours Flown	Active Pilots	Number of Aircraft	Hours Flown	Active Pilots	Number of Vehicles	Number of Pilots	Number of Aircraft	Hours Flown	Active Pilots	
1990	-	836,248	50,665	-	332,217	12,415	-	-	296	-	23,405	-	-	5,238	-
1995	-	699,892	47,397	-	322,874	11,389	-	6,015	324	-	26,162	-	-	5,360	-
2000	-	693,681	46,501	-	270,834	10,430	-	3,501	302	-	23,009	-	-	7,501	-
2004	2,096	643,845	44,937	1,808	267,902	10,837	-	5,672	432	-	18,553	-	191,061	9,842	-
2005	2,109	645,138	44,045	1,989	260,578	10,374	-	-	403	18,200	17,985	6,866	304,374	10,532	<b>29,164</b>
2006	2,103	619,323	43,266	1,956	240,739	10,311	-	-	403	18,500	18,296	6,993	371,838	11,262	<b>29,552</b>
2007	2,054	597,238	42,730	2,050	226,995	10,219	-	-	316	18,700	18,147	8,049	376,710	12,496	<b>30,853</b>
2008	2,057	568,704	41,266	1,853	228,000	9,951	-	4,120	249	18,900	18,354	8,214	378,032	13,108	<b>31,024</b>
2009	2,029	582,054	40,187	1,958	255,576	9,633	-	-	223	19,200	19,371	8,534	386,084	13,398	<b>31,721</b>

Active pilots includes student pilots

Gliders include motor gliders, towed gliders, and gliders launched by winch. Starting in 2005.

Source: French DGAC, Observatoire de l'Aviation civile at [www.developpement-durable.gouv.fr](http://www.developpement-durable.gouv.fr)

## 7.7 Germany – Number of General Aviation Aircraft by Type (2001-2011)

Year	Aircraft Type											Total Aircraft	
	Airplanes							Helicopters	Motor Gliders	Air Ships	Balloons	Gliders	
	Single Engine		Multi-Engine		Below 2,000 kg	2,000 to 5,700 kg	5,701 kg to 14,000 kg	14,001 kg to 20,000 kg	Above 20,000 kg				
2001	6,813	95	207	476	191	60	612	721	2,434	5	1,474	7,771	<b>20,859</b>
2002	6,731	92	208	467	184	55	619	731	2,494	5	1,400	7,728	<b>20,714</b>
2003	6,658	97	205	452	179	54	653	725	2,533	6	1,362	7,686	<b>20,610</b>
2004	6,670	94	199	440	172	55	619	720	2,584	4	1,351	7,703	<b>20,611</b>
2005	6,682	93	212	417	176	54	651	721	2,664	4	1,305	7,728	<b>20,707</b>
2006	6,704	102	224	417	181	56	663	729	2,766	4	1,278	7,741	<b>20,865</b>
2007	6,705	120	230	417	200	51	702	731	2,824	4	1,264	7,769	<b>21,017</b>
2008	6,738	126	232	436	224	45	734	739	2,948	4	1,286	7,815	<b>21,327</b>
2009	6,752	144	241	445	231	43	757	780	3,022	3	1,261	7,891	<b>21,570</b>
2010	6,801	153	242	444	228	40	772	811	3,081	4	1,260	7,867	<b>21,703</b>
2011	6,744	155	243	428	236	38	770	773	3,122	3	1,257	7,834	<b>21,603</b>

Source: German Civil Aviation Authority (Luftfahrt-Bundesamt / Statistiken) [www.lba.de](http://www.lba.de)



### 7.8 New Zealand – Number of General Aviation Aircraft by Type and Airmen Certificates (1933-2010)

Year	Aircraft Type						Total Aircraft	Airmen Certificates					Total Airmen Certificates		
	Airplanes by Mass				Sport	Helicopter		Recreational	Private	Commercial*	ATPL	Maintenance Engineer			
	Below 2,721 kg	2,721 to 5,670 kg	5,670 to 13,608 kg	13,608 kg and Above											
1933	*	*	*	*	*	*	65	*	165	33	*	28	226		
1947	*	*	*	*	*	*	154	*	863	200	*	125	1,188		
1959	*	*	*	*	*	*	647	*	1,291	657	*	313	2,261		
1974	*	*	*	*	*	*	1,430	*	3,752	1,555	*	660	5,967		
1992	1,334	77	46	56	1,092	338	2,976	*	*	*	*	*	*		
1993	1,410	77	49	61	1,121	356	3,076	*	3,801	2,942	1,194	*	7,937		
1994	1,482	92	59	65	1,136	392	3,226	*	4,126	3,136	1,240	1,300	9,802		
1995	1,522	101	61	69	1,150	426	3,329	*	4,226	3,256	1,296	1,356	10,134		
1996	1,548	111	67	67	1,178	449	3,420	*	4,414	3,497	1,321	1,464	10,696		
1997	1,559	113	68	67	1,163	435	3,405	*	4,292	3,510	1,391	1,498	10,691		
1998	1,559	113	68	67	1,163	435	3,405	*	4,143	3,433	1,473	1,547	10,596		
1999	1,539	104	67	73	1,124	420	3,327	*	*	*	*	*	*		
2000	1,522	109	69	75	1,127	411	3,313	*	3,878	3,229	1,514	1,648	10,269		
2001	1,506	107	67	77	1,129	420	3,306	*	3,790	3,130	1,519	1,735	10,174		
2002	1,492	105	82	77	1,172	450	3,378	*	3,579	3,228	1,503	1,766	10,076		
2003	1,505	117	74	83	1,245	506	3,530	*	3,762	3,317	1,608	1,847	10,534		
2004	1,548	132	68	95	1,358	594	3,795	*	3,711	3,381	1,695	1,927	10,714		
2005	1,564	143	65	103	1,419	643	3,937	*	3,580	3,530	1,814	2,075	10,999		
	Agricultural	Small	Medium	Large											
2006	127	1,420	78	117	1,638	653	4,033	*	3,465	3,620	1,818	2,151	11,054		
2007	124	1,449	82	116	1,723	698	4,192	-	3,819	3,817	1,968	2,227	11,831		
2008	120	1,492	81	121	1,793	747	4,354	68	3,733	4,056	2,039	2,342	12,170		
2009R	110	1,510	84	118	1,833	760	4,415	133	3,829	4,328	2,044	2,424	13,121		
2010	110	1,515	84	119	1,853	761	4,442	146	3,655	4,468	2,077	2,496	13,204		

R = Revised

The data does not differentiate if aeroplane is used for GA or commercial operations.

Commercial airmen certificates also includes ATPL prior to 1974.

In 2006, the CAA stopped publishing the number of registered aircraft by weight in favor of classes.

In August 2008, the CAA issued the first of a new type of pilot license, the Recreational Pilot License.

Source: Annual Profile, Aviation Safety Summary Report by Civil Aviation Authority of New Zealand wwwcaa.govt.nz

### 7.9 South Africa - Number of General Aviation Aircraft by Type (1999-2011)

Year	Aircraft Type													Total Aircraft	
	Aeroplane										Helicopter				
	Piston Engine Powered				Turboprop				Turbojet			Piston	Turbine		
	One Engine	Two Engine	Other	Agricultural	One Engine	Two Engine	Other	Agricultural	Two Engine	Three Engine	Other				
1999	2,282	695	4	144	66	201	10	43	157	17	21	228	251	3,103	7,222
2000	2,285	706	6	143	68	215	10	45	160	20	21	248	263	3,294	7,484
2001	2,280	701	6	144	79	237	10	48	164	27	22	258	271	3,470	7,717
2002	2,299	698	10	144	83	249	8	46	176	29	27	263	279	3,616	7,927
2003	2,338	716	12	148	91	271	8	52	197	31	34	308	290	3,907	8,403
2004	2,422	724	11	151	88	306	9	54	189	34	41	348	318	4,127	8,822
2005	2,459	731	10	150	93	310	8	56	206	21	44	385	337	4,253	9,063
2006	2,608	738	8	159	110	331	6	53	261	18	58	514	384	4,941	10,189
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	2,666	755	7	153	108	324	10	55	299	18	74	575	434	5,215	10,693
2009	2,712	751	7	154	105	329	9	54	315	15	82	604	461	5,352	10,950
2010	2,745	713	8	154	111	353	9	55	339	15	92	635	474	5,500	11,203
2011	2,808	710	9	152	112	353	9	54	365	16	93	669	459	5,674	11,483

2007 data is not available from the South African Aircraft Registry.

Source: South African Civil Aviation Authority wwwcaa.co.za and Registry wwwavdex.co.za

## 7.10 Switzerland – Number of General Aviation Aircraft by Type and Airmen Certificates (1990-2010)

Year	Aircraft Type									Total Aircraft	Airmen Certificates					Total Airmen Certificates		
	Airplanes by Weight			Total Airplanes	Helicopter	Motor Glider	Gliders	Free Balloons	Airship		Private Pilots	Commercial Pilots	ATPL	Helicopter Pilots	Other Airmen Certificates			
	Below 2,250 kg	2,250 - 5,700 kg	Above 5,700 kg															
1990	*	*	*	1,952	199	131	1,035	335	1	3,653	8,179	*	886	*	4,610	*		
1991	*	*	*	1,992	218	148	1,035	388	4	3,785	*	*	*	*	*	*		
1992	*	*	*	2,026	233	173	1,045	433	4	3,914	*	*	*	*	*	*		
1993	*	*	*	2,041	240	192	1,061	467	4	4,005	*	*	*	*	*	*		
1994	*	*	*	2,043	246	196	1,058	492	4	4,039	*	*	*	*	*	*		
1995	*	*	*	2,069	238	199	1,072	524	5	4,107	*	*	*	*	*	*		
1996	*	*	*	2,058	234	202	1,080	516	6	4,096	*	*	*	*	*	*		
1997	1,549	271	193	2,013	238	209	1,076	516	6	4,058	*	*	*	*	*	*		
1998	1,581	197	227	2,005	244	228	1,046	510	6	4,039	*	*	*	*	*	*		
1999	1,579	167	265	2,011	246	232	1,033	493	6	4,021	*	*	*	*	*	*		
2000	1,572	157	285	2,014	254	246	1,024	504	6	4,048	6,792	1,421	2,223	1,008	4,058	15,502		
2001	1,564	154	306	2,024	266	252	1,028	492	5	4,067	6,336	1,396	2,160	951	3,822	14,665		
2002	1,537	151	304	1,992	265	260	1,016	490	7	4,030	6,294	1,399	2,185	950	3,646	14,474		
2003	1,539	156	257	1,952	280	259	1,000	474	7	3,972	6,673	1,190	2,094	980	3,384	14,321		
2004	1,528	142	248	1,918	275	254	974	465	7	3,893	6,553	1,628	2,104	1,064	3,281	14,630		
2005	1,502	149	241	1,892	285	254	949	452	9	3,841	5,928	1,000	2,086	1,082	3,265	13,361		
2006	1,497	148	248	1,893	284	248	941	445	11	3,822	5,911	900	2,055	1,101	3,243	13,210		
2007	1,492	161	260	1,913	290	244	908	447	11	3,813	5,740	959	2,076	1,098	3,101	12,974		
2008	1,468	147	285	1,900	307	246	875	427	10	3,765	5,431	916	2,133	1,063	3,030	12,573		
2009	1,436	140	293	1,869	320	246	843	397	10	3,685	5,586	940	2,203	1,135	2,855	12,719		
2010	1,413	197	303	1,913	327	251	824	381	9	3,705	5,581	952	2,266	1,168	3,023	12,990		

Other Airmen Certificates include Glider Pilots, Balloon Pilots, Validations, Flight Engineers, Multi-Crew Pilots and Radio Navigators

Souce: Swiss Federal Office of Civil Aviation, Bundesamt für Zivilluftfahrt (BAZL) www.bazl.admin.ch

## 7.11 United Kingdom – Number of General Aviation Aircraft by Type (1989-2011)

Year	Number of Registered Aircraft by Type													Total		
	Aeroplane Fixed Wing								Micro-light	Heli-copter	Glider	Hang Glider	Balloon & Min. Lift	Airship	Gyro-plane	
	Amph.	1 to 750 kg	751 to 5,700 kg	5,701 to 15,000 kg	15,001 to 50,000 kg	Over 50,000 kg	SLMG <sup>1</sup>	Sea-plane								
1989	11	2,143	5,003	236	251	324	196	2	3,298	842	6	-	1,391	53	202	13,958
1990	13	2,295	5,176	255	273	336	209	2	3,050	912	6	-	1,545	50	228	14,350
1991	14	2,289	5,228	282	274	358	214	3	3,194	902	9	-	1,682	51	210	14,710
1992	16	2,385	5,187	298	261	380	238	4	3,347	876	9	-	1,744	54	218	15,017
1993	16	2,507	5,130	278	263	388	234	3	3,337	832	9	-	1,668	47	229	14,941
1994	16	2,593	5,075	279	261	396	239	3	3,266	828	8	-	1,758	47	246	15,015
1995	16	2,657	5,043	285	241	401	239	2	3,207	838	8	-	1,821	44	257	15,059
1996	17	2,712	5,111	267	246	406	245	2	3,231	859	8	-	1,898	40	261	15,303
1997	18	2,758	5,190	257	251	439	255	2	3,314	906	7	-	1,896	40	261	15,594
1998	18	2,827	5,292	247	280	499	263	2	3,450	980	7	-	1,843	40	265	16,013
1999	17	2,813	5,347	254	289	541	268	2	3,548	1,013	7	1	1,907	42	244	16,293
2000	15	2,824	5,429	262	288	592	273	2	3,478	1,057	1	7	1,979	33	233	16,473
2001	15	2,832	5,442	276	296	624	273	2	3,531	1,090	1	10	1,812	28	242	16,474
2002	14	2,859	5,461	267	307	645	270	2	3,618	1,134	1	11	1,799	31	244	16,663
2003	15	2,914	5,556	254	264	644	274	3	3,828	1,159	1	12	1,812	30	247	17,013
2004	17	2,994	5,647	254	271	662	276	3	4,070	1,238	2	12	1,862	29	251	17,588
2005	18	3,022	5,711	254	256	679	280	3	4,118	1,314	45	13	1,905	27	249	17,894
2006	19	3,077	5,822	253	272	712	280	2	4,254	1,386	149	13	1,922	24	260	18,445
2007	21	3,153	5,887	258	257	760	286	2	4,392	1,490	1,107	13	1,962	24	278	19,890
2008	21	3,186	6,000	270	270	760	295	3	4,447	1,495	2,258	13	1,983	24	306	21,331
2009	21	3,235	5,907	256	292	766	292	3	4,375	1,428	2,306	12	1,842	22	306	21,063
2010	20	3,217	5,764	253	306	742	287	2	4,071	1,364	2,295	8	1,720	18	312	20,379
2011	20	3,199	5,663	228	297	742	285	2	4,043	1,299	2,256	8	1,655	19	324	20,040

SLMG = Self-Launching Motor Glider

Source: UK Civil Aviation Authority, Civil Registry Statistics, G-INFO Database www.caa.co.uk

Does not differentiate if aeroplane is used for GA or commercial operations.

Data from December 31 of specified year (published first day of the following year).

### 7.12 Total Number of Registered General Aviation Aircraft by Country with Active General Aviation Industries (1980-2011)

Year	Australia	Austria	Brazil	Canada	France	Germany	New Zealand	South Africa	Switzerland	United Kingdom	United States
1980	*	*		23,624	*	*	*	*	*	*	211,039
1981	*	*	*	24,437	*	*	*	*	*	*	213,219
1982	*	*	*	24,682	*	*	*	*	*	*	209,778
1983	*	*	*	25,899	*	*	*	*	*	*	213,292
1984	*	*	*	26,514	*	*	*	*	*	*	220,941
1985	*	*	*	26,801	*	*	*	*	*	*	210,853
1986	*	*	*	27,027	*	*	*	*	*	*	219,325
1987	*	*	*	27,517	*	*	*	*	*	*	217,202
1988	*	*	*	27,955	*	*	*	*	*	*	210,246
1989	*	*	*	28,121	*	*	*	*	*	13,958	219,738
1990	*	*	*	28,155	*	*	*	*	3,653	14,350	212,230
1991	*	*	*	28,003	*	*	*	*	3,785	14,710	196,874
1992	*	*	*	28,066	*	*	2,976	*	3,914	15,017	185,650
1993	*	*	*	27,912	*	*	3,076	*	4,005	14,941	177,120
1994	*	*	*	27,848	*	*	3,226	*	4,039	15,015	172,935
1995	9,548	*		27,937	*	*	3,329	*	4,107	15,059	188,089
1996	9,665	*	10,315	28,002	*	*	3,420	*	4,096	15,303	191,129
1997	9,849	*	10,611	28,054	*	*	3,405	*	4,058	15,594	192,414
1998	10,006	*	10,927	28,017	*	*	3,405	*	4,039	16,013	204,710
1999	10,168	*	14,217	28,047	*	*	3,327	7,222	4,021	16,293	219,464
2000	10,125	*	14,553	28,242	*	*	3,313	7,484	4,048	16,473	217,534
2001	10,402	*	14,937	28,493	*	20,859	3,306	7,717	4,067	16,474	211,446
2002	10,455	*	15,265	28,744	*	20,714	3,378	7,927	4,030	16,663	211,244
2003	10,671	*	15,536	29,112	*	20,610	3,530	8,403	3,972	17,013	209,708
2004	10,904	*	15,881	29,614	*	20,611	3,795	8,822	3,893	17,588	219,426
2005	11,180	*	16,270	30,244	29,164	20,707	3,937	9,063	3,841	17,894	224,352
2006	11,117	*	15,125	31,018	29,552	20,865	4,033	10,189	3,822	18,445	221,942
2007	11,541	*	15,673	31,886	30,853	21,017	4,192	*	3,813	19,890	231,607
2008	12,045	*	16,576	32,933	31,024	21,327	4,354	10,693	3,765	21,331	228,663
2009	12,229	*	19,765	33,533	31,721	21,570	4,415	10,950	3,685	21,063	223,877
2010	12,564	*	*	34,175	*	21,703	4,442	11,203	3,705	20,379	223,370
2011	*	1,520	*	34,947	*	21,603	*	11,483	*	20,040	*

Source: See Table 7.1 through 7.11

### 7.13 ICAO - Number of General Aviation Aircraft by Region (1985-1997)

Region	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Europe	30,800	31,200	31,500	32,000	33,100	33,200	31,300	31,100	36,200	36,100	N/A	N/A	N/A
Africa	4,600	4,650	4,600	4,500	4,970	4,950	6,200	5,500	6,200	6,050	N/A	N/A	N/A
Middle East	520	540	550	600	690	670	610	580	590	580	N/A	N/A	N/A
Asia & Pacific	8,400	8,500	9,200	9,800	10,300	10,200	10,240	10,250	11,100	11,500	N/A	N/A	N/A
North America	236,000	224,300	224,150	229,320	223,030	232,080	224,750	219,000	188,300	185,890	N/A	N/A	N/A
Latin America & Caribbean	13,700	13,900	13,800	13,500	15,200	15,200	18,900	18,600	18,800	18,600	N/A	N/A	N/A
<b>Total-ICAO States</b>	<b>294,020</b>	<b>283,090</b>	<b>283,800</b>	<b>289,720</b>	<b>287,290</b>	<b>296,300</b>	<b>292,000</b>	<b>285,030</b>	<b>261,190</b>	<b>258,720</b>	<b>268,000</b>	<b>269,000</b>	<b>273,500</b>

Source: ICAO

### 7.14 ICAO - General Aviation Hours Flown (in Thousands) by Region (1985-1997)

Region	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Europe	6,080	6,400	6,500	6,600	6,720	6,870	6,730	6,700	7,260	7,240	6,880	6,270	6,000
Africa	790	820	800	800	820	820	700	700	800	770	800	780	700
Middle East	260	240	260	260	270	310	300	180	300	290	300	300	290
Asia & Pacific	2,420	2,740	3,060	3,250	3,380	3,470	3,500	3,770	4,180	4,250	4,260	4,680	4,880
North America	33,920	32,100	31,070	31,110	31,610	31,950	32,100	26,200	24,220	23,120	25,520	25,550	26,820
Latin America & Caribbean	3,850	3,380	3,550	3,570	3,400	3,300	3,150	3,150	3,340	3,280	3,110	3,150	3,300
<b>Total-ICAO States</b>	<b>47,320</b>	<b>45,680</b>	<b>45,240</b>	<b>45,590</b>	<b>46,200</b>	<b>46,720</b>	<b>46,480</b>	<b>40,700</b>	<b>40,100</b>	<b>38,950</b>	<b>40,870</b>	<b>40,730</b>	<b>41,990</b>

Excludes the Russian Federation

Source: ICAO

# 2012

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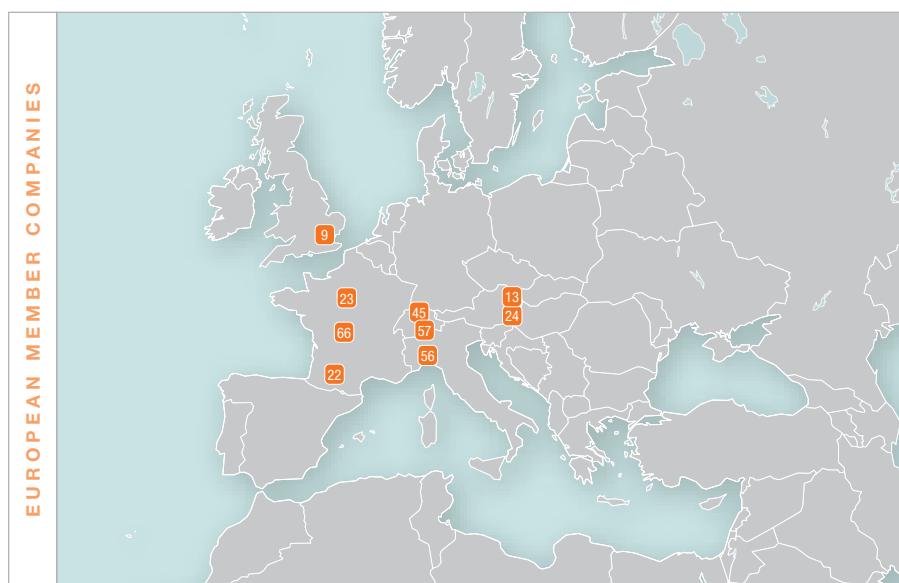
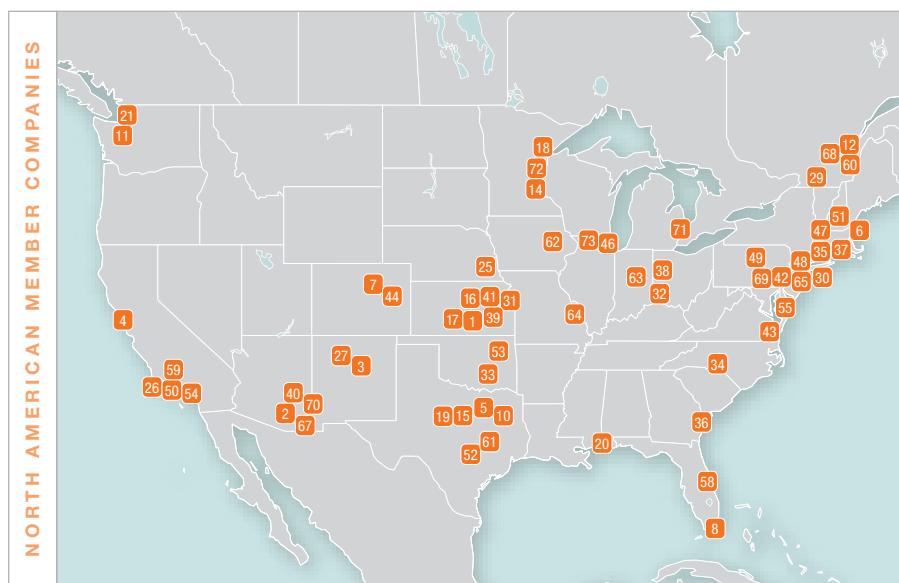


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