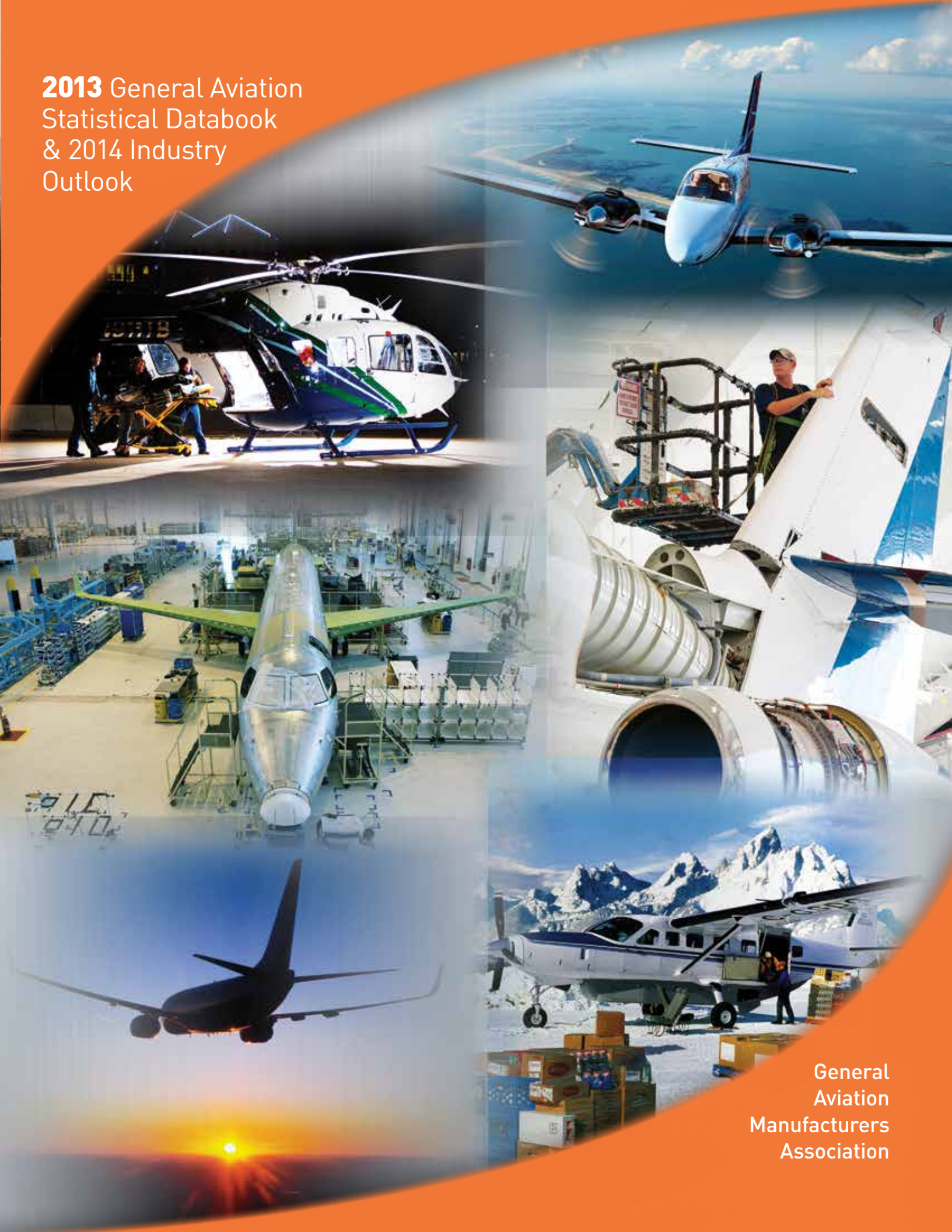


2013 General Aviation
Statistical Databook
& 2014 Industry
Outlook



General
Aviation
Manufacturers
Association



GAMA is an international trade association representing more than 80 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 manage fleets of aircraft. For more information, visit GAMA's website at www.GAMA.aero.



General aviation is defined as all aviation other than military and scheduled commercial airlines.

GENERAL AVIATION:

- Includes over **360,000** general aviation aircraft worldwide, ranging from two-seat training aircraft and utility helicopters to intercontinental business jets flying today, of which **209,000** aircraft are based in the United States.
- Contributes more than **\$150 billion** to the U.S. economy annually and employs more than **1.2 million** people.
- In the U.S., flies almost **25 million** flight hours, of which two-thirds are flown for business purposes.
- Flies to more than **5,000** U.S. public airports while scheduled airlines serve less than 500 airports. The European general aviation fleet can fly to over **3,900** airports.
- Is the primary training ground for most commercial airline pilots.

Welcome from GAMA Chairman

Thank you for reading GAMA's *2013 General Aviation Statistical Databook & 2014 Industry Outlook*, the industry resource on general aviation data. I'm honored to serve as GAMA's Chairman in 2014.

Throughout this book, you'll find the latest information on general aviation (GA) shipments and billings, GA fleet and flight activity, the pilot population, airports and aeronautical facilities, GA safety data, and international GA statistics. It's a review like no other of just how our industry did in 2013, as well as a closer look at the many parts that comprise the general aviation business.

I also hope you'll read our expanded introduction, which talks about many of the important initiatives GAMA undertook in 2013. These include the successful passage of the Small Airplane Revitalization Act, GAMA's GA Jobs Rallies throughout the United States, and its critical work in Brussels, China, and throughout the world in highlighting the contributions of general aviation manufacturers.



I was very pleased to be part of the GAMA/Build A Plane Aviation Design Challenge. I spent one day last summer flying some of the eight high school winners in a 1944 Stinson V-77 Reliant, and another giving them a tour of Boeing's aircraft facility in Everett, Washington. I'm sure you'll agree after reading about the competition and seeing the photos

that this was an extremely worthwhile effort to promote Science, Technology, Engineering, and Math (STEM) education in U.S. high schools and build our future workforce.

As the President of Boeing Business Jets, I see the value every day of my GAMA membership, and this book reflects that. I'm proud of what GAMA accomplished in 2013 and even more excited about what lies ahead in 2014. Thank you for your support.

Best,

Steve Taylor

GAMA Chairman and
President, Boeing Business Jets

GAMA's History and Mission

Founded in 1970, GAMA is devoted to one primary purpose: fostering and advancing the general welfare, safety, interests, and activities of general aviation. This includes promoting a better understanding of general aviation manufacturing and the important role it plays in creating good jobs and economic opportunity, as well as supporting educational and charitable activities in communities around the globe.

Headquartered in Washington, D.C., with an office in Brussels, Belgium, as well as representation in Beijing, China, GAMA represents the interests of its members to government leaders and agencies throughout the world. These interests include safety regulations and standards, market access, development of aviation infrastructure, tax policy, environmental policy, and aviation security. GAMA works with industry associations and companies worldwide to promote the interests of general aviation.

GAMA represents more than 80 of the world's leading manufacturers of general aviation airplanes and rotorcraft, engines, avionics, components, and related services. In addition to building nearly all of the general aviation airplanes flying worldwide today, GAMA member companies also operate fleets of airplanes, fixed-based operations, pilot/technician training centers, and maintenance facilities worldwide.



GAMA's Founding Board of Directors, 1970



The Small Airplane Revitalization Act, which President Obama signed into law, was based on recommendations from 150 government and industry experts.

2013 in Review

President Obama Signs Small Airplane Revitalization Act Into Law After Quick Passage by U.S. Congress

On November 27, President Barack Obama made the Small Airplane Revitalization Act of 2013 the law of the United States with his signature.

The law built upon the recommendations of the Federal Aviation Administration (FAA)'s Part 23 Reorganization Aviation Rulemaking Committee (ARC), which was co-chaired by GAMA's Greg Bowles. The ARC included 150 government and industry representatives who spent 18 months developing the recommendations included in the bill. The law requires the FAA to implement the ARC's recommendations no later than December 31, 2015. The recommendations include:

- Establishing a regulatory regime for small airplanes that will improve safety and reduce the regulatory cost burden for the FAA and the aviation industry;
- Establishing broad, outcome-driven safety objectives that will spur innovation and technology adoption;
- Replacing current, prescriptive requirements under Part 23 with performance-based regulations;
- Using consensus standards accepted by the FAA to clarify how the safety objectives of Part 23 may be met using specific designs and technologies.

Introduced in May in the U.S. House of Representatives by Congressmen Mike Pompeo (R-KS), Sam Graves (R-MO), Dan Lipinski (D-IL), Rick Nolan (D-MN), and Todd Rokita (R-IN), and in the U.S. Senate by Senators Amy Klobuchar (D-MN) and

Lisa Murkowski (R-AK), the legislation moved quickly through both chambers of Congress. The bill unanimously passed the Senate in October and the House in November. Its passage was especially impressive given how few bills Congress approved in 2013—just 72 bills, the lowest number in recent history.

After President Obama signed the bill into law, GAMA President and CEO Pete Bunce remarked, "The tremendous support this law enjoyed in Congress, and the speed with which it moved through the legislative process, demonstrates a bipartisan commitment to safety, as well as a recognition that the FAA's overly bureaucratic, outdated, and prescriptive regulations must change. This law is a win for the government as well as general aviation airframers and suppliers, but more importantly, for the general aviation pilots and passengers who will be able to benefit more rapidly from new safety-enhancing technologies."

U.S. House General Aviation Caucus Reaches Milestone with Membership

In September, the U.S. House General Aviation Caucus set a record with the announcement that more than half of all U.S. representatives, or 223 members, had joined the caucus. By the end of the year, that number grew to 236 representatives, making it one of the biggest caucuses in the House. Forty-one U.S. senators belong to the Senate General Aviation Caucus.

The House caucus is co-chaired by Representatives Sam Graves (R-MO) and John Barrow (D-GA); the Senate caucus is co-chaired by Senators Mark Begich (D-AK) and Mike Johanns (R-NE). GAMA President and CEO Pete Bunce praised the caucus for its work on critical issues facing aviation and helping to ensure passage of the Small Airplane Revitalization Act.

GAMA Holds GA Rallies in Wisconsin and New Mexico

GAMA took its successful rallies celebrating the many economic and job contributions of general aviation manufacturing in the United States to two new locations in 2013: Wisconsin and New Mexico.

On May 30, more than 400 people gathered at Gulfstream Aerospace Corp.'s Appleton, Wisconsin facility to highlight general aviation's economic impact. Speakers included Governor Scott Walker, U.S. Senator Ron Johnson, U.S. Representatives Tom Petri and Reid Ribble, Outagamie County Executive Thomas Nelson, GAMA Chairman Brad Mottier, and GAMA President and CEO Pete Bunce. The ABC, CBS, FOX, and NBC affiliates in Green Bay, as well as the *Appleton Post-Crescent*, covered the rally.

"The economic impact created by general aviation is strong," said Governor Walker, "and it plays such an important role in providing the transportation needs of individuals and businesses around the globe."

Albuquerque, New Mexico, was home to GAMA's tenth GA jobs rally, which took place at Cutter Aviation on August 12. Governor Susana Martinez, U.S. Senator Tom Udall, and Albuquerque Mayor Richard Berry spoke at the event, as did Aspen Avionics' John Uczekaj, Bendix/King's Kevin Gould, Eclipse Aerospace's Ed Lundeen, and Bunce.

U.S. Senator Tom Udall said, "The general aviation industry is growing rapidly in Albuquerque, and our state is well positioned to be a hub for aviation innovation. I am committed to ensuring that Congress works with the aviation industry and entrepreneurs so they have the support they need to create jobs in New Mexico."

About 350 people attended the rally, including GAMA member company employees, active-duty military personnel and veterans, and other general aviation enthusiasts. The event was

covered by the local ABC and Univision affiliates, as well as the *Albuquerque Journal* and *Albuquerque Business First*.

Members Meet with Record Number of U.S. Lawmakers on Hill Day

GAMA members took Capitol Hill by storm on May 8, as they held a record number of meetings with U.S. senators, representatives, and their staffs during the association's annual "GAMA Hill Day."

Thirteen teams of GAMA members held 114 meetings with senators and representatives from 37 states, including key transportation leaders in both chambers. The meetings included discussion of critical issues facing member companies such as Federal Aviation Administration certification activities, small airplane revitalization efforts, user fees, tax policy, aviation security, Ex-Im bank reauthorization, and the transition to unleaded avgas. Impressively, 43 percent of the meetings were with senators and representatives who had not met with GAMA during a previous Hill Day.



Active-duty military personnel and veterans listen to remarks during GAMA's New Mexico GA rally in August.



From left to right: U.S. Representative Tom Petri, Governor Scott Walker, U.S. Representative Reid Ribble, U.S. Senator Ron Johnson, GAMA President and CEO Pete Bunce, GAMA Chairman Brad Mottier, Gulfstream's Greg Laabs, and Outagamie County Executive Thomas Nelson at GAMA's Wisconsin GA rally in May.

Bunce Testifies Before U.S. House Aviation Subcommittee on Certification, Competitiveness

GAMA President and CEO Pete Bunce testified twice before the U.S. House Aviation Subcommittee in 2013, once on the current certification process and once on aviation competitiveness.

On October 30, Bunce told the subcommittee, chaired by U.S. Congressman Frank LoBiondo (R-NJ), that the Federal Aviation Administration (FAA) certification process must change. "The uncertainty and inefficiency of the FAA's current certification practices and processes stymies safety innovation by slowing the ability to get needed products to the field quickly," Bunce said. "It also restricts industry growth and has resulted in missed business opportunities, negatively impacting decisions to invest in new projects, expand facilities, and increase employment."

Bunce testified again before the subcommittee on December 12, joining other industry leaders to discuss the state of U.S. aviation. He noted that general aviation supports over 1.2 million jobs and more than \$150 billion in

economic activity annually. General aviation manufacturing employs individuals in more than 40 states and generated \$4.8 billion in exports in 2012. To ensure the industry continues to grow, Bunce said the FAA must continue to improve its certification process and leverage its resources more efficiently.

Aviation manufacturing is a global manufacturing industry. "As manufacturers, we need clear and consistent leadership in the international aviation marketplace, which means the FAA must actively defend the robustness and efficiency of its safety certification globally," he said. Bunce also called on the subcommittee to give the Department of Transportation "a clearer role in advocating for the aviation community within the government and internationally."

GAMA Supports FAA's Restructuring of Airman Testing Standards

GAMA played an active leadership role in backing the Federal Aviation Administration's (FAA) efforts to modernize how pilots are trained and certified in the United States. The initiative, which would make major changes to simplify the framework for pilot training standards, follows recommendations from the Airman Testing Standards and Training Aviation Rulemaking Committee (ARC). GAMA's Jens Hennig chaired the ARC.



The proposed Airman Certification Standards (ACS) framework brings together the existing Practical Test Standards and knowledge test questions into a single set of standards that provides the bridge between the Part 61 regulatory requirements and the knowledge, skills, and risk management that should be taught to pilots. The incorporation of clear risk management requirements will help advance general aviation safety. The ACS was developed jointly by representatives from across the aviation training community—including manufacturer, pilot, and instructor training organizations, universities, aviation training providers, and material developers—as well as the FAA.

The proposed ACS for private, instrument, commercial, and instructor pilots are currently being reviewed by the FAA and will be implemented over the next few years. Revisions to the Air Transport Pilot certificate standard are also underway.

GAMA Spurs Progress on Unleaded Avgas Replacement

The Federal Aviation Administration's (FAA) announcement in May to formally solicit sample fuels of unleaded aviation gasoline, or avgas, in the United States drew praise from the General Aviation Avgas Coalition, which includes GAMA.

The effort is part of the Piston Aviation Fuels Initiative (PAFI) to identify the most viable unleaded fuels to replace the 100 low-lead avgas in use today. PAFI will assess the viability of candidate fuels in terms of performance impact upon the existing fleet, production and distribution infrastructure, environment and toxicology, and economic considerations.

GAMA also gained funding support within the administration and the U.S. Congress to help the transition to unleaded avgas. Congress allocated \$6 million—above the administration's \$5.6 million request—for Fiscal Year 2014 to facilitate avgas replacement assessment and testing. The work will be conducted at the FAA's William J. Hughes Technical Center to determine standardized qualification and certification data for candidate unleaded fuels to facilitate fleetwide approval.

“The core principles serve to open the door to global commerce for small communities and rural populations across the Asia-Pacific region.”

Asia-Pacific Transport Ministers Endorse Core Principles for Business Aviation

In September, Transport Ministers of the 21 member economies of the Asia-Pacific Economic Cooperation (APEC) forum adopted a set of core principles to facilitate business aviation in the area. The principles recognize the ability of business aviation operators to fly freely within the region, urge countries to make it easier for operators to obtain necessary permits, and encourage authorities to treat non-commercial business aviation operators as private operators.

“These principles serve to open the door to global commerce for smaller communities and rural populations across the region that require access to major cities and manufacturing centers,” the ministers noted in a statement at the conclusion of their September meeting.

GAMA has strongly supported the APEC initiative since it was launched in September 2011 and provided technical advice to the APEC working group that developed the core principles. The principles will help APEC achieve its key objectives of enhancing trade and investment among its member economies.



**Asia-Pacific
Economic Cooperation**

The Asia-Pacific region more than doubled its market share of annual business aircraft deliveries between 2007 and 2012. “This strong growth is proof that economies in this region recognize that business aviation is not only a productivity tool for business

but also helps countries achieve their economic and regional development objectives,” GAMA President and CEO Pete Bunce said. “With these core principles now endorsed at the highest level, work must begin to implement them across the region.”

GAMA Continues Promotion of GA in Europe, Expands Brussels Office

GAMA focused on a number of significant issues to promote the growth and vitality of general aviation in Europe in 2013.

Throughout the year, GAMA leaders met with top European aviation officials, including Patrick Ky, who became Executive Director of the European Aviation Safety Agency (EASA) in September. GAMA’s Brussels office also hosted the initial meetings of a newly created committee that represents the GA community in EASA rulemaking advisory bodies.

In addition, GAMA spoke out on critical certification issues in Europe. GAMA President and CEO Pete Bunce hailed the August agreement between the European Union and Brazil on aviation safety. The agreement will reduce redundant oversight by streamlining certification efforts. Bunce also spoke at Aero Friedrichshafen in April about the importance of CS-23/Part 23 efforts to make it easier to certify light GA aircraft while reducing costs for government and industry.

Deepening GAMA’s commitment to better serve its membership in Europe, Greg Bowles joined Brian Davey in August with a permanent posting to the GAMA Brussels office.



GAMA’s Brussels office hosted two EASA meetings in 2013.



Eight High School Students Win STEM Competition, Spend Two Weeks Building Two Glasair Sportsman Airplanes in Washington State

Eight U.S. high school students hailing from Minnesota and Michigan had the experience of a lifetime when they helped build two Glasair Aviation Sportsman aircraft after winning the GAMA/Build A Plane Aviation Design Challenge.

To win the challenge, the students used complimentary “Fly to Learn” curricula and training, including software powered by X-Plane, which allowed them to design and fly their own virtual airplanes. Each school entered a design to compete in a virtual fly-off, which was scored on aerodynamic and performance parameters. Twenty-seven schools in 22 states entered the competition; judges from GAMA selected the winning high schools.

GAMA announced the winners—Canby High School in Canby, Minnesota, and Saline High School in Saline, Michigan—at its spring Board meeting on May 9. As their prize, each high school was able to send four students, one teacher, and one chaperone for an all-expenses-paid, two-week trip to Glasair Aviation in Arlington, Washington, to help build two Glasair Sportsman aircraft—metal and composite airplanes that each seat four adults. Sold as kits, the planes can be assembled with assistance through Glasair’s well-known “Two Weeks to Taxi” program.



TOP: Wyatt Johansen works on an airplane’s engine; ABOVE: The teams from Canby, MN, and Saline, MI at the start of the build.

The Canby High School team consisted of students John Deslauriers, Wyatt Johansen, Leah Schmitt, and Brandon Stripling, teacher Dan Lutgen, and chaperone Robert Slaba, who is also the school’s principal. The Saline High School team included students Aidan Muir, Lee Luckhardt, Kyle LaBombarbe, and Julia Garner, teacher Ed Redies, and chaperone Dustin Muir. GAMA President and CEO Pete Bunce and Jeppesen CEO Mark Van Tine were the builders. Glasair’s build team was led by Ben Rauk and Ted Setzer.

From June 17 to June 29, the teams’ work included bucking rivets, fabricating metal and composite brackets, running control cables, sanding the airframe, fabricating and attaching fuel



GAMA Launches Facebook Page



In March, GAMA launched a Facebook page as a way to share news, photos, and videos more quickly than on its Web site. The page includes extensive updates on the Aviation Design Challenge build as well as the Wisconsin and New Mexico GA Jobs Rallies, an interview with Congressman Mike Pompeo (R-KS), and video of GAMA President and CEO Pete Bunce testifying on Capitol Hill. Several posts received more than 5,000 views.

lines, installing baffling on the engine, mounting the gear, and integrating the sensors and the propeller to the engine. The first plane taxied on day 10 and passed a rigorous Federal Aviation Administration (FAA) airworthiness inspection on day 12. On their last day, the students were able to cheer the first plane's initial flight.

"The teams experienced firsthand the kind of craftsmanship that goes into building an airplane and the professional opportunities that exist in the aviation field," Bunce said, noting that almost all of the students said they now plan to pursue a career in aviation.

GAMA member companies contributed financial resources, equipment, and supplies to the build, including the kit airplane for one of the planes, and propellers, certified avionics, parts, and paint for both planes. In addition, Glasair donated two weeks of staff time to support the build. Besides supplies, each team received round-trip airfare, hotels, and meals. They also visited the nearby Boeing aircraft factory, the Museum of Flight,

and the Seattle Tacoma airport facility, including the control tower, operations center, and BBA Aviation's Aircraft Service International Group commercial fueling operations.

After the build was complete, six of the eight students and both unpainted Sportsman airplanes traveled to Oshkosh, Wisconsin, for EAA AirVenture in July. While there, they met with Wisconsin Lieutenant Governor Rebecca Kleefisch, National Transportation Safety Board Member Earl Weener, and FAA Deputy Administrator Michael Whitaker. The students appeared at the Build A Plane Teachers' Day event and the Kiddie Hawk exhibit, were recognized at press conferences for Glasair Aviation, Piper, Lycoming, and Jeppesen, and visited the exhibits of several sponsors, including UTC Aerospace Systems, Wipaire, and Aspen Avionics. Jeppesen sponsored the students' travel to Oshkosh.

The competition and build received extensive media coverage in *Flying*, *General Aviation News*, *Aviation International News*, *Midwest Flyer*, *Helicopter Maintenance*, the *Saline (MI) Heritage*, the *Arlington (WA) Times*, and *AirVenture Today*, and cover stories in *AOPA Pilot* and *Aircraft Maintenance Technology* magazines.



TOP LEFT: Aidan Muir drilling; TOP RIGHT: Leah Schmitt bucking rivets; LEFT: One of the finished Glasair Sportsman airplanes.

GAMA 2014 Agenda

GAMA's sole focus is on facilitating the growth and vitality of general aviation (GA) around the world. The specific strategies for 2014 are designed to support a dynamic and sustainable global general aviation manufacturing industry whose products 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 GA serves.

GAMA's specific goals for 2014 include:

Raising GA safety levels worldwide

- Enable the development of new general aviation products and adoption of new safety technologies for small airplanes and rotorcraft through transformative initiatives, such as restructuring of regulatory standards, establishing consensus standards-based methods of compliance, and facilitating equipage of the existing fleet
- Advance public-private partnerships—like the General Aviation Joint Steering Committee for airplanes in the U.S. and similar efforts for helicopters—to raise safety levels and reduce the number of fatal GA accidents
- Facilitate the use and retrieval of electronic flight data to inform aviation safety activities
- Promote the use of safety risk analysis by aviation regulators and conduct outreach about GA safety efforts in emerging markets
- Advocate and highlight best practices in safety management for the airworthiness and operation of GA aircraft

Improving governmental effectiveness and efficiency and removing unnecessary regulatory burdens

- Promote certification reform initiatives with authorities to strengthen safety oversight and ensure support for industry development of new aviation products and technologies
- Develop recommendations to transform Federal Aviation Administration Part 21 certification procedures to improve their overall effectiveness and efficiency
- Work to establish consistent and appropriate airworthiness standards for business aircraft cabin interiors

- Improve repair station flexibility by adopting modern business practices and eliminating redundant audits
- Strive to ensure that security programs are risk-based and enhance security without adversely impacting the utility of GA
- Streamline the U.S. alien flight student program to achieve efficient vetting of pilots seeking training

Building global awareness about the economic impact and societal benefits of GA

- Highlight GA's economic contribution through GA rallies and the annual "GAMA Hill Day" in the U.S., engagement with members of the European Parliament, and other forums
- Expand social media efforts to bring awareness to and promote GA activities
- Spotlight GA efforts to enhance workforce education, support U.S. military veterans, and promote economic development and job creation
- Support the U.S. Congressional GA Caucuses and the "No Plane No Gain" advocacy campaign

Strengthening access and markets for GA globally

- Continue work to implement the core business aviation principles adopted in 2013 by Ministers of the Asia-Pacific Economic Cooperation forum; research similar initiatives in other regions such as the Middle East
- Advocate for improvements to European aviation regulations that conform to the European Union's GA Safety Strategy
- Ensure effective safety cooperation by strengthening bilateral safety agreements between states of design and improving the efficiency of type validation processes
- Promote general aviation access to airspace and airports

Advocating for government policies that strengthen GA

- Work with the International Civil Aviation Organization (ICAO) and other government and industry stakeholders to advance the environmental goals achieved at ICAO's 38th General Assembly
- Advocate for sound tax and trade policies worldwide to foster the growth of GA
- Strive for appropriate oversight, accountability, and funding for aviation safety regulators
- Partner with government and other industry stakeholders to prioritize aviation investments and leverage technology to reduce costs and improve service delivery

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2013 Market Overview

GAMA's annual statistical databook covers a number of topics, including a detailed overview of general aviation airplane and helicopter shipments. The following chapters also include data about the general aviation aircraft fleet in key markets, a detailed review of the U.S. pilot population, information about airports where general aviation flies, and statistics about safety in the United States and Europe.

Airplane Shipments and Billings

In 2013, airplane shipments increased by 4.3 percent to 2,256 airplane deliveries, while billings increased 24.0 percent to \$23.4 billion, the second-highest industry billing number ever recorded. (The industry's peak billings occurred in 2008 at \$24.8 billion.) The year-end results were supported by positive delivery performance across all airplane types.

Business Jets

The business jet market stabilized in 2013 after slowing down the past four years. There were 678 business jets delivered, compared to 672 business jets in 2012. The entry-into-service of several new models and improving demand provided stabilization to the market and a shift to positive deliveries.

The North American market share was 52.4 percent, compared to 49.7 percent in 2012. Europe declined from 20.8 percent in 2012 to 15.6 percent in 2013 market share. Customer deliveries in the rest of the world included 11.9 percent to customers in the Asia-Pacific region, 11.1 percent to Latin America, and 9.0 percent to the Middle East and Africa.

Turboprops

The turbo-propeller airplane segment also continued to grow, resulting in 645 shipments compared to 584 shipments in 2012, a 10.4 percent increase. Shipments of agricultural turboprops, which GAMA began tracking in 2011, remained strong. Traditional single- and twin-engine turboprop airplane shipments provided year-over-year increases in unit deliveries.

North American customers took 57.1 percent of turboprop airplane deliveries in 2013, an increase from 48.6 percent in 2012. The Asia-Pacific region took the second-largest market share at 14.0 percent, followed by Latin American at 13.2 percent. European customers took delivery of 10.5 percent, and the Middle East and Africa accounted for 5.3 percent.

Turbine Helicopters

The turbine helicopter segment provided positive delivery performance in 2013 based on analysis of equivalent companies from 2012. GAMA identified 782 turbine helicopter shipments in 2013, which is an increase of 9.2 percent compared to the prior year for the same reporting companies. In this year's databook, GAMA has expanded the available historical data about helicopter shipments with select information from 1999 through 2013.

Piston Airplane and Helicopter Deliveries

Piston airplane deliveries totaled 933 shipments in 2013, which was an increase of 2.8 percent from 2012, which there were 908 shipments. Feedback from manufacturers indicates that global demand from flight schools is supporting the year-over-year growth. North America took 52.8 percent of piston-engine airplanes, Europe accounted for 17.2 percent, followed by the Asia-Pacific region at 15.1 percent, Latin America at 10.0 percent, and the Middle East and Africa at 5.0 percent of shipments.

GAMA also tracks worldwide piston helicopter shipments. In 2013, the general aviation industry delivered 335 piston-powered helicopters, which was a slight increase from the 328 units delivered in 2012.

Turbine Operators

The fractional fleet declined to 869 aircraft in 2013, according to JETNET, LLC. The fractional fleet peaked in 2008 at 1,094 aircraft and has shrunk each year since then. There were 4,365 fractional owners in 2013, which is also down compared to five years ago, when there were 5,179 owners.

JETNET also tracks worldwide business aircraft operator and fleet data. The worldwide turbine airplane fleet included 33,861 airplanes in 2013 and an additional 19,509 turbine helicopters.

Pilot Population

The United States active pilot population continues to shrink. There were only 180,214 private pilots at the end of 2013. The private pilot population has declined since the early 1980s, when it peaked at 357,479 pilots, and in recent years has lost between 5,000 and 10,000 active pilots each year. There were a total of 599,086 total active pilots in the United States in 2013, of which 40,621, or 6.78 percent, were female—the highest ratio of female aviators on record.

Improving Safety

The U.S. Federal Aviation Administration's preliminary data about general aviation safety points a double-digit decline in the number of fatal general aviation accidents during 2013. There were approximately 216 fatal accidents during the year. While this data is preliminary, it holds promise that the goal of reducing the fatal accident rate for general aviation to one fatal accident per 100,000 hours flown may be possible to achieve by 2018.

GAMA also includes general aviation safety data developed by the European Aviation Safety Agency (EASA) for 2006 through 2012, the most recent year available. EASA statistics from 2012 identify a reduction in both the total and number of fatal accidents.

Additional data can be accessed online at www.GAMA.aero. If you have questions about GAMA's databook, you can contact the staff at +1-202-393-1500.

General Aviation Shipments and Billings



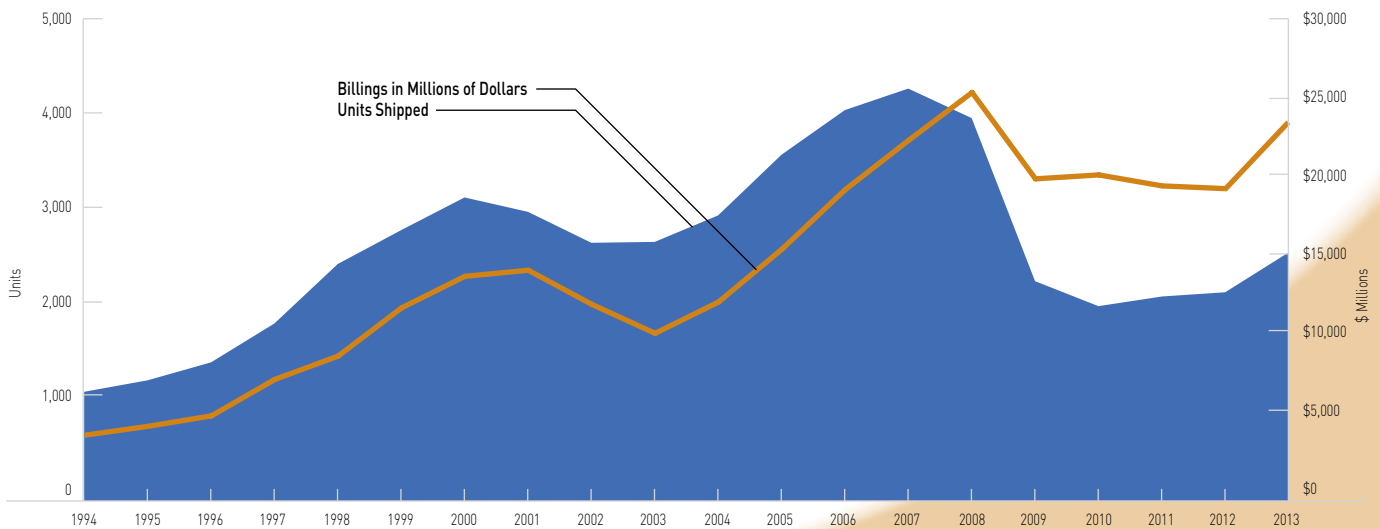
1.1 General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2013)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	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	2,120	761	137	898	526	696	1,222
2012	2,164	817	91	908	584	672	1,256
2013	2,256	831	102	933	645	678	1,323

Starting in 2011, the data includes the addition of agricultural airplanes, new piston airplane manufacturers, and some helicopter manufacturers. The data cannot be directly compared to 2010 and earlier entries. Refer to Tables 1.4b and 1.4c for make and model detail.

Source: GAMA

FIGURE 1.1 General Aviation Airplane Shipments and Billings Worldwide (1994–2013)



Source: GAMA

1.2 Estimated Billings (in Millions of Dollars) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2013)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine
1994	3,749	n/a	n/a	111	714	2,924	3,638
1995	4,294	n/a	n/a	169	774	3,351	4,125
1996	4,936	n/a	n/a	191	864	3,881	4,745
1997	7,170	n/a	n/a	238	913	6,019	6,932
1998	8,604	n/a	n/a	377	1,011	7,216	8,227
1999	11,560	n/a	n/a	440	930	10,190	11,120
2000	13,496	n/a	n/a	512	1,323	11,661	12,984
2001	13,868	n/a	n/a	541	1,210	12,117	13,327
2002	11,778	n/a	n/a	483	868	10,427	11,295
2003	9,998	n/a	n/a	545	837	8,616	9,453
2004	11,918	n/a	n/a	692	997	10,229	11,226
2005	15,156	n/a	n/a	805	1,189	13,161	14,350
2006	18,815	n/a	n/a	857	1,389	16,569	17,958
2007	21,837	n/a	n/a	897	1,593	19,347	20,940
2008	24,772	n/a	n/a	945	1,953	21,874	23,827
2009	19,474	n/a	n/a	442	1,589	17,443	19,032
2010	19,715	n/a	n/a	415	1,300	18,000	19,300
2011	19,042	n/a	n/a	441	1,365	17,235	18,600
2012	18,895	n/a	n/a	428	1,359	17,108	18,467
2013	23,421	n/a	n/a	543	1,821	21,058	22,879

Source: GAMA

1.3 Customer Delivery Region (in Percent of Total) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (2007–2013)

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	57.7	12.0	15.6	10.0	4.6	52.6	14.1	14.4	13.6	5.3	50.0	20.2	12.9	10.1	6.8
2012	50.4	19.6	16.3	9.7	4.1	48.6	12.6	17.4	14.5	6.9	49.7	20.8	11.8	11.6	6.1
2013	52.8	17.2	15.1	10.0	5.0	57.1	10.5	14.0	13.2	5.3	52.4	15.6	11.9	11.1	9.0

Source: GAMA



1.4a Worldwide Business Jet Shipments by Manufacturer (1999–2013)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Airbus	0	0	5	2	0	0	9	11	13	11	13	15	10	9	6
Airbus Corporate Jet (all models)	-	-	5	2	0	0	9	10	12	9	11	-	-	-	-
ACJ318	-	-	-	-	-	-	-	-	-	-	-	2	2	2	1
ACJ319	-	-	-	-	-	-	-	-	-	-	-	8	6	6	4
ACJ320	-	-	-	-	-	-	-	-	-	-	-	3	1	0	0
ACJ321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ACJ330	-	-	-	-	-	-	-	-	1	1	1	1	1	1	0
ACJ340	-	-	-	-	-	-	-	1	0	1	1	1	0	0	0
Avcraft (prev. Fairchild)	0	0	4	4	9	9	1	0	0	0	0	0	0	0	0
Envoy 3	-	-	4	4	9	9	1	-	-	-	-	-	-	-	-
Beechcraft Corporation	100	118	98	94	100	115	141	140	162	160	98	73	52	32	6
Premier I/A	-	-	18	29	29	37	30	23	54	31	16	11	11	3	-
Hawker 400XP	45	51	25	19	24	28	53	53	41	35	11	12	1	-	-
Hawker 750	-	-	-	-	-	-	-	-	-	23	13	5	7	-	-
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	22	17	-
Hawker 4000	-	-	-	-	-	-	-	-	-	6	20	16	10	12	6
Boeing Business Jet	29	14	16	11	7	3	4	13	7	6	6	12	8	12	7
Boeing Business Jet	29	14	11	9	4	2	3	12	7	3	3	4	8	2	5
Boeing Business Jet 2	-	-	5	2	3	1	1	1	0	1	0	2	0	2	1
Boeing Business Jet 3	-	-	-	-	-	-	-	-	-	2	1	4	0	0	0
Boeing Business Jet 747	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0
Boeing Business Jet 767	-	-	-	-	-	-	-	-	-	-	1	0	0	0	0
Boeing Business Jet 777	-	-	-	-	-	-	-	-	-	-	1	2	0	0	0
Boeing Business Jet 787	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Bombardier Business Aircraft	173	207	179	101	70	129	188	213	224	245	173	150	182	179	180
Learjet 31A	24	27	17	9	2	-	-	-	-	-	-	-	-	-	-
Learjet 40/XR	-	-	-	-	-	17	21	26	-	-	-	-	-	-	-
Learjet 45/XR	43	71	63	27	17	22	28	30	57	48	33	16	24	24	1
Learjet 60	32	35	29	17	12	9	18	15	23	26	13	12	19	15	10
Learjet 70/75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Challenger 300	-	-	-	-	1	28	50	55	51	59	33	29	37	48	55
Challenger 604 / 605	42	39	41	31	24	29	36	29	35	44	36	38	43	34	32
Global 5000	-	-	-	-	-	4	17	18	-	-	-	-	-	-	-
Global 6000 / Express	32	35	29	17	14	20	13	22	46	51	51	49	53	54	62
CL 850/870/890	-	-	-	-	-	-	5	18	12	17	7	6	6	4	2
Cessna Aircraft Company	216	252	306	305	196	181	247	307	388	466	289	178	183	181	139
CE-510 Citation Mustang	-	-	-	-	-	-	-	1	45	101	125	73	43	38	20
CE-525 Citation CJ1	59	56	61	30	22	20	14	-	-	-	-	-	-	-	-
CE-525 Citation CJ1+	-	-	-	-	-	-	4	25	34	20	14	3	2	-	-
CE-525 Citation M2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
CE-525A Citation CJ2	-	8	41	86	56	27	23	1	-	-	-	-	-	-	-
CE-525A Citation CJ2+	-	-	-	-	-	-	-	36	44	56	21	17	15	19	15
CE-525B Citation CJ3	-	-	-	-	-	6	48	72	78	88	40	20	22	21	15
CE-525C Citation CJ4	-	-	-	-	-	-	-	-	-	-	-	19	48	44	33
CE-550 Citation Bravo	36	54	48	41	31	25	21	18	-	-	-	-	-	-	-
CE-560 Citation Ultra	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CE-560 Citation Encore	-	6	37	36	21	24	13	12	-	-	-	-	-	-	-
CE-560 Citation Encore+	-	-	-	-	-	-	-	-	23	28	5	5	4	-	-
CE-560 Citation Excel	39	79	85	81	48	23	-	-	-	-	-	-	-	-	-
CE-560 Citation XLS	-	-	-	-	-	32	64	73	82	72	7	-	-	-	-
CE-560 Citation XLS+	-	-	-	-	-	-	-	-	-	8	37	22	27	31	31
CE-650 Citation VII	14	12	-	-	-	-	-	-	-	-	-	-	-	-	-
CE-680 Citation Sovereign	-	-	-	-	-	9	46	57	65	77	33	16	19	22	5
CE-680 Citation Sovereign+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
CE-750 Citation X	36	37	34	31	18	15	14	12	17	16	7	3	3	6	0
Dassault Falcon Jet	69	73	75	66	49	63	51	61	70	72	77	95	63	66	77
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	7	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	22	8
Falcon 2000LXS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Falcon 2000S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Falcon 7X	-	-	-	-	-	-	-	-	6	21	32	41	31	37	43

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1.4a Worldwide Business Jet Shipments by Manufacturer (1999–2013) CONTINUED

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Eclipse Aerospace, Inc.	0	0	0	0	0	0	0	1	98	161	0	0	0	0	0
Eclipse 500	-	-	-	-	-	-	-	1	98	161	-	-	-	-	-
Embraer	0	0	0	8	13	13	20	27	36	38	122	145	99	99	119
Phenom 100	-	-	-	-	-	-	-	-	-	2	97	100	41	29	30
Phenom 300	-	-	-	-	-	-	-	-	-	-	1	26	42	48	60
Legacy 600 / 650	-	-	-	8	13	13	20	27	36	36	18	11	13	17	21
Lineage 1000 / E190 Head of State	-	-	-	-	-	-	-	-	-	-	5	5	3	2	4
Shuttles (ERJs and E-Jets)	-	-	-	-	-	-	-	-	-	-	1	3	0	3	4
Emivest (prev. Sino Swearingen)	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0
SJ30-2	-	-	-	-	-	-	-	1	1	0	2	0	0	0	0
Gulfstream Aerospace Corporation	80	88	101	85	74	78	89	113	138	156	94	99	99	94	144
G100/150 (prev. IAI Astra)	9	11	5	9	24	22	26	42	59	68	19	24	21	11	23
G200 (prev. IAI Galaxy)	1	6	25	15	-	-	-	-	-	-	-	-	-	-	-
G300/350/400/450 (prev. GIV/GIVSP)	39	37	36	29	50	56	63	71	79	88	75	75	78	83	121
G500/G550 (prev. GV/GVSP), G650	31	34	35	32	-	-	-	-	-	-	-	-	-	-	-
Total Number of Airplanes	667	752	784	676	518	591	750	887	1,137	1,315	874	767	696	672	678
% Change	29.5%	12.7%	4.3%	-13.8%	-23.4%	14.1%	26.9%	18.3%	28.2%	15.7%	-33.5%	-12.2%	-9.3%	-3.4%	0.9%
Total Billings for Airplanes (\$M)	10,190	11,661	12,117	10,427	8,616	10,229	13,161	16,555	19,347	21,874	17,443	18,000	17,235	17,105	21,058
% 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%	-4.2%	-0.8%	23.1%

Source: GAMA

1.4b Worldwide Turboprop Airplane Shipments by Manufacturer (1999–2013)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Air Tractor	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	130	168	174
AT-402A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	1	0
AT-402B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	21	33
AT-502A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	1	2
AT-502B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57	81	70
AT-504	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	6	2
AT-602	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	10	18
AT-802	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26	18	9
AT-802A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21	30	40
Beechcraft Corporation	177	205	130	82	81	102	114	140	157	172	119	90	92	89	135
King Air C90	41	46	41	21	18	27	35	52	46	66	44	28	29	27	27
King Air B200 / B250	55	59	46	26	38	39	37	42	58	54	37	24	25	22	36
King Air 350	45	46	32	24	24	36	42	46	53	52	38	38	38	40	72
1900D	36	54	11	11	1	-	-	-	-	-	-	-	-	-	-
Cessna Aircraft Company	87	92	75	80	57	64	86	67	79	101	97	95	93	107	105
CE-208 Caravan 675	20	16	19	14	8	13	11	8	11	12	12	8	10	11	11
CE-208B Grand Caravan	67	76	56	66	49	51	75	59	68	89	85	87	83	96	94
Extra Aircraft	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
EA500	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1
Maule Air Incorporated	1	0	3	0	1	2	0	0	0	1	0	0	0	0	0
M-7-420AC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MT-7-420	1	0	3	0	1	2	0	0	0	0	0	0	0	0	0
Pacific Aerospace Corporation	0	0	1	0	2	8	10	5	10	15	12	11	10	10	6
PAC 750XL	-	-	1	0	2	8	10	5	10	15	12	11	10	10	6
Piaggio	0	6	12	14	12	16	14	19	21	30	24	11	14	5	2
P.180 Avanti	n/a	6	12	14	12	16	13	-	-	-	-	-	-	-	-
P.180 Avanti II	-	-	-	-	-	-	1	19	21	30	24	11	14	5	2
Pilatus	55	69	70	45	61	70	80	90	98	100	105	84	69	67	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	5	4
PC-12	55	69	70	45	61	70	80	90	92	97	100	79	63	62	65
Piper Aircraft, Inc.	0	18	98	25	24	26	40	49	53	52	29	25	32	32	34
PA-46-500 TP Meridian	-	18	98	25	24	26	40	49	53	52	29	25	32	32	34
Quest Aircraft Company	0	0	0	0	0	0	0	0	1	7	24	14	13	15	28
Kodiak 100	-	-	-	-	-	-	-	-	1	7	24	14	13	15	28
SOCATA	20	25	33	34	34	31	31	42	46	60	36	38	38	38	40
TBM 700	20	25	33	34	34	31	31	-	-	-	-	-	-	-	-
TBM 850	-	-	-	-	-	-	-	42	46	60	36	38	38	38	40
Thrush Aircraft, Inc.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	51	51
S2R-T34	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30	39	20
S2RHG-T65	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1
S2R-T660	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1
S2R-G10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	2
S2R-H80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	9	27
Total Number of Airplanes	340	415	422	280	272	319	375	412	465	538	446	368	526	584	645
% 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%	n/a	11.0%	10.4%
Total Billings for Airplanes (\$M)	930	1,323	1,210	868	837	997	1,189	1,389	1,593	1,953	1,589	1,300	1,365	1,359	1,821
% 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%	n/a	-0.4%	33.9%

Source: GAMA

1.4c Worldwide Piston-Engine Airplane Shipments by Manufacturer (1999–2013)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Adam Aircraft	0	0	0	0	0	0	2	4	3	0	0	0	0	0	0
A500	-	-	-	-	-	-	2	4	3	-	-	-	-	-	-
Air Tractor	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
AT-401B	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
Alpha Aviation	0	0	0	0	0	0	0	5	13	1	0	0	0	0	0
120T	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
160A	-	-	-	-	-	-	-	5	9	1	-	-	-	-	-
160Ai	-	-	-	-	-	-	-	-	2	0	-	-	-	-	-
American Champion	91	96	56	53	63	94	89	60	70	54	26	37	29	18	26
7EC Champ	-	-	-	-	-	-	-	1	21	7	1	0	3	0	3
7ECA Aurora	9	3	2	3	2	2	3	2	4	3	2	2	1	0	0
7GCAA Adventurer	19	23	8	12	9	12	12	6	6	2	1	2	0	0	0
7GCBC Citabria Explorer	31	22	21	13	12	24	26	16	8	8	4	4	6	3	1
8GCBC Scout	5	23	6	11	8	18	9	14	8	10	8	15	13	7	6
8KCAB Super Decathlon	27	25	19	14	32	38	39	21	23	24	10	14	6	8	10
8KCAB Xtreme Decathlon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Aviat Aircraft	83	91	57	38	47	42	47	0	0	0	0	0	0	0	0
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	n/a	n/a
Husky Pup	-	-	-	-	3	3	1	n/a	n/a	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	n/a	n/a
Beechcraft Corporation	144	153	136	83	82	93	99	118	111	103	56	51	54	36	70
Beechcraft Bonanza A/G36	77	85	63	51	55	62	71	80	73	63	36	22	24	12	35
Beechcraft Bonanza B36TC	20	18	26	5	-	-	-	-	-	-	-	-	-	-	-
Beechcraft Baron B/G58	47	50	47	27	27	31	28	38	38	40	20	29	30	24	35
Bellanca	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Super Viking 17-30A	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Britten-Norman	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
BN-2B Islander	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Cessna Aircraft Company	899	912	821	559	588	654	822	865	807	733	355	261	413	283	206
CE-162 SkyCatcher	-	-	-	-	-	-	-	-	-	-	1	22	168	19	-
CE-172R Skyhawk	180	150	107	57	58	32	37	87	133	55	16	8	26	27	0
CE-172S Skyhawk	272	340	341	258	291	204	314	322	240	228	110	77	77	113	106
CE-182T Skylane	248	267	142	109	118	196	241	140	161	109	58	64	40	48	13
CE-T182T Turbo Skylane	-	-	96	79	47	133	118	187	140	105	75	36	37	19	26
CE-206H Stationair	79	53	41	18	16	22	29	25	20	17	3	4	11	16	3
CE-T206H Turbo Stationair	120	102	94	38	58	67	83	104	111	95	46	42	53	40	37
CE-350 Corvalis	-	-	-	-	-	-	-	-	1	14	5	1	0	1	0
CE-400 Corvalis TT	-	-	-	-	-	-	-	-	1	110	41	7	1	0	21
Columbia Aircraft (prev. Lancair)	0	5	27	24	51	78	114	185	152	0	0	0	0	0	0
Columbia 300	-	5	27	24	19	-	-	-	-	-	-	-	-	-	-
Columbia 350	-	-	-	-	32	28	25	39	34	-	-	-	-	-	-
Columbia 400	-	-	-	-	-	50	89	146	118	-	-	-	-	-	-
Cirrus Aircraft	9	95	183	397	469	553	600	721	710	549	266	264	255	253	276
Cirrus SR20	9	95	59	105	112	91	116	150	112	115	28	42	48	84	32
Cirrus SR22	-	-	124	292	355	459	475	565	588	427	238	165	105	81	112
Cirrus SR22T	-	-	-	-	-	-	-	-	-	-	-	57	102	88	132
Cirrus SRV	-	-	-	-	2	3	9	6	10	7	-	-	-	-	-
Commander Aircraft	13	20	11	7	0	0	0	0	0	0	0	0	0	0	0
Commander 114B	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commander 114TC	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Commander 115	-	11	5	1	-	-	-	-	-	-	-	-	-	-	-
Commander 115TC	-	8	6	6	-	-	-	-	-	-	-	-	-	-	-
CubCrafters	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	47	58	63
CC11-100 Sport Cub S2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2
CC11-160 Carbon Cub SS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	38	57	52
CC18-180 Top Cub	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	1	9
Diamond Aircraft	0	0	0	155	228	261	329	438	471	308	163	130	185	156	139
HK-36	-	-	-	-	-	-	-	-	-	-	13	10	3	3	1
DA-20	n/a	n/a	n/a	70	75	58	54	55	58	69	14	31	40	32	14
DA-40	-	-	n/a	85	153	203	207	220	232	154	98	57	72	93	102
DA-42	-	-	-	-	-	-	68	163	181	85	38	32	70	28	22
Embraer	17	17	1	0	0	0	0	0	0	0	0	0	0	0	0
EMB-201A Ipanema	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMB-202 Ipanema	12	15	1	-	-	-	-	-	-	-	-	-	-	-	-
EMB-720 Minuano	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMB-810 Seneca II	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-

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1.4c Worldwide Piston Engine Airplane Shipments by Manufacturer (1999–2013) CONTINUED

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Extra Aircraft	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	29
EA300	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	29
Flight Design GmbH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	89	76	89
ASTM CT Series	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	89	76	89
GippsAero Pty Ltd.	0	0	0	0	19	20	22	20	17	19	11	14	10	14	12
GA-8 Airvan	-	-	-	-	19	20	22	20	17	19	11	14	10	14	12
Liberty Aerospace	0	0	0	0	0	0	2	29	38	33	13	14	3	0	0
XL2	-	-	-	-	-	-	2	29	38	33	13	14	3	0	0
Maule Air Incorporated	68	57	54	46	31	25	27	38	36	27	7	4	4	9	6
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	-	1	-
M-7-260, C	16	10	11	3	4	3	4	2	4	4	4	-	1	3	4
MT-7-235	4	5	16	12	7	1	2	9	2	6	2	-	-	1	-
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	1	1
MXT-7-160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MXT-7-180, A, AC	18	13	3	5	2	8	4	4	12	6	-	-	2	3	-
M-8-235	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
M-9-235	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Micco	0	6	10	0	0	0	0	0	0	0	0	0	0	0	0
SP-20	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
SP-26	-	1	10	-	-	-	-	-	-	-	-	-	-	-	-
Mooney	97	100	29	10	36	37	85	75	79	65	19	2	0	0	0
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	0	0
M20S Eagle	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M20S Eagle 2	-	19	5	2	1	-	-	-	-	-	-	-	-	-	-
M20TN Acclaim	-	-	-	-	-	-	-	7	58	44	15	2	0	0	0
Piper Aircraft, Inc.	341	377	343	265	205	163	193	189	168	216	61	135	104	126	154
PA-28-161 Warrior III	20	43	32	29	31	18	37	19	27	23	8	23	15	20	2
PA-28-181 Archer III	107	102	88	38	49	19	16	29	16	7	1	21	2	4	48
PA-28R-201 Arrow IV	6	18	23	26	16	12	9	5	8	1	0	4	0	2	1
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	-	-	-	-	-
PA-34-220T Seneca V	57	42	38	43	28	10	12	26	22	27	7	22	21	17	22
PA-44-180 Seminole	8	11	62	60	16	11	29	11	14	24	5	16	16	22	23
PA-46-350P Malibu Mirage	63	63	10	19	7	15	11	31	30	21	7	26	33	49	42
PA-46R-350T Matrix	-	-	-	-	-	-	-	-	-	101	33	23	17	12	16
Quartz Mountain Aerospace	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0
QMA 11E	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-
Symphony Aircraft (prev. OMF)	0	0	0	0	19	1	10	5	0	0	0	0	0	0	0
Symphony 160	-	-	-	-	19	1	10	5	-	-	-	-	-	-	-
Pacific Aerospace Corporation	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
CT/4E Airtrainer	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
SOCATA	37	48	63	70	40	5	9	0	0	0	0	0	0	0	0
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	-	-	-	-	-	-	-	-
Tiger Aircraft	0	0	0	14	18	19	15	3	0	0	0	0	0	0	0
AG-5B Tiger	-	-	-	14	18	19	15	3	-	-	-	-	-	-	-
WACO Classic Aircraft	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	6	7
2T-1A-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
YMF-5D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	6	6
Total Number of Airplanes	1,801	1,980	1,792	1,721	1,896	2,051	2,465	2,755	2,675	2,119	977	912	1,198	1,062	1,077
% Change	12.1%	9.9%	-9.5%	-4.0%	10.2%	8.2%	20.2%	11.8%	-2.9%	-20.8%	-53.9%	-6.7%	n/a	-11.4%	1.4%
Total Billings for Airplanes (\$M)	440	512	541	483	545	692	805	857	897	945	442	415	441	428	543
% 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%	n/a	-3.0%	26.8%

Table 1.4c includes all piston engine-powered airplanes delivered by the manufacturers listed, including type-certified piston-engine airplanes under airworthiness standards other than Part/CS-23, such as those types certified under EASA CS-Very Light Aircraft and CS-Light Sport Aircraft, as well as Special Light-Sport Aircraft.

Source: GAMA

1.4d Worldwide Rotorcraft Shipments by Manufacturer (1999–2013), Select Data (Including Select Military Data)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Airbus Helicopters (prev. Eurocopter)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	381	488	588	558	527	503	475	497
EC120	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	11	11
AS350 B2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57	36	32
AS350 B3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	142	124	174
EC130	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42	43	35
AS355 NP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	7	5
EC135	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	53	56	48
EC145	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	28	24
AC365 N3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	7	8
EC155	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12	7	10
AS332	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	0
EC225	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	15	27
Military (All Models)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	141	130
Bell Helicopters (Civil Total)	146	143	122	92	105	111	123	159	181	n/a	n/a	132	125	188	213
206B	28	14	14	10	10	7	16	20	28	n/a	n/a	5	-	-	-
206L/LT	12	27	10	12	6	18	22	21	24	n/a	n/a	15	14	9	11
407	62	62	47	33	46	40	41	67	73	n/a	n/a	62	55	85	110
412	26	24	22	25	29	33	29	35	39	n/a	n/a	28	20	39	36
427	-	5	15	5	7	9	5	7	10	n/a	n/a	1	4	4	-
429	-	-	-	-	-	-	-	-	-	-	-	20	28	43	56
430	18	11	14	7	7	4	10	9	7	n/a	n/a	-	-	-	-
Huey II	-	-	-	-	-	-	-	-	-	-	-	1	4	8	-
H-1 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	28	21	25
V22 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	38	41
Brantly	0	6	2	1	1	0	2	0	0	0	0	0	0	0	0
B-2B	0	6	2	1	1	0	2	0	0	0	0	0	0	0	0
Enstrom Helicopter Corp. (Civil Total)	8	7	8	12	17	23	29	23	19	10	6	4	n/a	5	17
F-28/280	5	2	4	4	7	5	15	10	6	1	1	1	n/a	2	4
480	3	5	4	8	10	18	14	13	13	9	5	3	n/a	3	13
F-28/280 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0
480 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11	10
Hiller	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
UH-12E	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Kaman	0	3	6	0	0	0	0	0	0	0	0	0	n/a	n/a	n/a
K-1200	0	3	6	0	0	0	0	0	0	0	0	0	n/a	n/a	n/a
MD Helicopters	33	41	28	12	16	10	3	13	18	52	40	12	n/a	n/a	n/a
500	5	11	4	5	3	1	0	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a
520N	5	4	2	3	1	0	2	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a
530	6	4	0	0	3	1	0	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a
600	6	8	2	0	1	4	1	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a
900	11	14	20	4	8	4	0	n/a	7	n/a	n/a	n/a	n/a	n/a	n/a
Robinson Helicopter Company	278	390	328	255	422	690	806	749	823	893	433	162	356	517	523
R22	128	126	134	107	128	234	243	97	159	164	25	40	56	40	42
R44 Raven I / II	150	264	194	148	294	456	563	652	664	729	408	112	212	286	289
R66	-	-	-	-	-	-	-	-	-	-	-	10	88	191	192
Schweitzer	35	36	33	32	38	48	58	61	70	51	27	29	n/a	n/a	n/a
300C	23	13	17	13	20	13	12	12	11	16	10	14	n/a	n/a	n/a
300CB/300CBi	11	17	12	17	15	27	40	44	51	27	13	6	n/a	n/a	n/a
330/333	1	6	4	2	3	8	6	5	8	8	4	9	n/a	n/a	n/a
Sikorsky	0	9	8	6	23	34	49	52	79	78	58	42	n/a	n/a	n/a
S-70	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0
S-76	7	7	8	6	23	29	30	36	50	53	34	21	n/a	n/a	n/a
S-92	0	0	0	0	0	4	19	16	29	25	24	21	n/a	n/a	n/a

Source: GAMA, Aerospace Industries Association, and company reports.

1.5 U.S.-Manufactured General Aviation Airplane Shipments by Type (1946–2013)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine	Companies Reporting	Factory Net Billings (\$ Millions)
1946	35,000	n/a	n/a	35,000	-	-	-	-	\$111
1947	15,594	n/a	n/a	15,594	-	-	-	15	\$58
1948	7,037	n/a	n/a	7,037	-	-	-	12	\$32
1949	3,405	n/a	n/a	3,405	-	-	-	11	\$18
1950	3,386	n/a	n/a	3,386	-	-	-	13	\$19
1951	2,302	n/a	n/a	2,302	-	-	-	12	\$17
1952	3,058	n/a	n/a	3,058	-	-	-	8	\$27
1953	3,788	n/a	n/a	3,788	-	-	-	7	\$34
1954	3,071	n/a	n/a	3,071	-	-	-	7	\$43
1955	4,434	n/a	n/a	4,434	-	-	-	7	\$68
1956	6,738	n/a	n/a	6,738	-	-	-	8	\$104
1957	6,118	n/a	n/a	6,118	-	-	-	9	\$100
1958	6,414	n/a	n/a	6,414	-	-	-	10	\$102
1959	7,689	6,849	840	7,689	-	-	-	9	\$130
1960	7,588	6,569	1,019	7,588	-	-	-	8	\$151
1961	6,756	5,995	761	6,756	-	-	-	8	\$124
1962	6,697	5,690	1,007	6,697	-	-	-	7	\$137
1963	7,569	6,248	1,321	7,569	-	-	-	7	\$153
1964	9,336	7,718	1,606	9,324	9	3	12	8	\$199
1965	11,852	9,873	1,780	11,653	87	112	199	8	\$318
1966	15,768	13,250	2,192	15,442	165	161	326	10	\$445
1967	13,577	11,557	1,773	13,330	149	98	247	14	\$360
1968	13,698	11,398	1,959	13,357	248	93	341	14	\$426
1969	12,457	10,054	2,078	12,132	214	111	325	14	\$585
1970	7,292	5,942	1,159	7,101	135	56	191	13	\$337
1971	7,466	6,287	1,043	7,330	89	47	136	11	\$322
1972	9,774	7,898	1,548	9,446	179	149	328	12	\$558
1973	13,646	10,780	2,413	13,193	247	206	453	12	\$828
1974	14,166	11,562	2,135	13,697	250	219	469	12	\$909
1975	14,056	11,439	2,116	13,555	305	196	501	12	\$1,033
1976	15,449	12,783	2,120	14,903	359	187	546	12	\$1,226
1977	16,907	14,057	2,195	16,252	428	227	655	12	\$1,488
1978	17,811	14,398	2,634	17,032	548	231	779	12	\$1,781
1979	17,050	13,286	2,843	16,129	639	282	921	12	\$2,165
1980	11,860	8,640	2,116	10,756	778	326	1,104	12	\$2,486
1981	9,457	6,608	1,542	8,150	918	389	1,307	12	\$2,920
1982	4,266	2,871	678	3,549	458	259	717	11	\$2,000
1983	2,691	1,811	417	2,228	321	142	463	10	\$1,470
1984	2,431	1,620	371	1,991	271	169	440	9	\$1,681
1985	2,029	1,370	193	1,563	321	145	466	9	\$1,431
1986	1,495	985	138	1,123	250	122	372	9	\$1,262
1987	1,085	613	87	700	263	122	385	9	\$1,364
1988	1,143	628	67	695	291	157	448	11	\$1,923
1989	1,535	1,023	87	1,110	268	157	425	11	\$1,804
1990	1,144	608	87	695	281	168	449	14	\$2,008
1991	1,021	564	49	613	222	186	408	14	\$1,968
1992	941	552	41	593	177	171	348	16	\$1,840
1993	964	516	39	555	211	198	409	16	\$2,144
1994	929	444	55	499	208	222	430	13	\$2,357
1995	1,077	515	61	576	255	246	501	13	\$2,842
1996	1,171	607	42	649	289	233	522	13	\$3,048
1997	1,562	898	86	984	236	342	578	12	\$4,593
1998	2,212	1,434	94	1,528	271	413	684	12	\$5,761
1999	2,530	1,634	114	1,748	265	517	782	13	\$7,843
2000	2,816	1,810	103	1,913	315	588	903	15	\$8,558
2001	2,631	1,581	147	1,728	303	600	903	14	\$8,641
2002	2,207	1,366	130	1,496	187	524	711	12	\$7,719
2003	2,137	1,519	71	1,590	163	384	547	13	\$6,434
2004	2,355	1,706	52	1,758	194	403	597	13	\$6,816
2005	2,857	2,024	71	2,095	240	522	762	13	\$8,667
2006	3,147	2,208	79	2,287	256	604	860	16	\$10,367
2007	3,279	2,097	77	2,174	290	815	1,105	16	\$11,941
2008	3,079	1,700	91	1,791	333	955	1,288	15	\$13,348
2009	1,585	770	32	802	269	514	783	13	\$9,082
2010	1,334	679	67	746	224	364	588	12	\$7,875
2011	1,465	639	67	706	395	364	759	16	\$8,266
2012	1,518	645	63	708	463	347	810	17	\$8,017
2013	1,615	674	80	754	527	334	861	17	\$11,069

Source: GAMA

1.6 U.S.-Manufactured General Aviation Airplane Billings (in Millions of Dollars) by Type (1978–2013)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine
1978	1,781	516	493	1,009	394	378	772
1979	2,165	523	555	1,078	548	540	1,088
1980	2,486	391	403	794	875	816	1,691
1981	2,920	327	348	675	1,120	1,125	2,245
1982	2,000	200	220	420	590	990	1,580
1983	1,470	145	115	260	460	750	1,210
1984	1,681	147	133	280	436	966	1,402
1985	1,431	126	68	194	524	713	1,237
1986	1,262	80	43	123	430	709	1,139
1987	1,364	80	18	98	477	789	1,266
1988	1,918	66	12	78	596	1,242	1,838
1989	1,804	104	24	128	524	1,149	1,673
1990	2,008	68	24	92	644	1,272	1,916
1991	1,968	n/a	n/a	93	527	1,348	1,875
1992	1,840	n/a	n/a	96	460	1,284	1,744
1993	2,144	n/a	n/a	76	595	1,473	2,068
1994	2,357	n/a	n/a	81	595	1,681	2,276
1995	2,842	n/a	n/a	123	653	2,066	2,719
1996	3,048	n/a	n/a	142	715	2,191	2,906
1997	4,580	n/a	n/a	200	727	3,653	4,380
1998	5,761	n/a	n/a	330	763	4,668	5,431
1999	7,843	n/a	n/a	385	658	6,800	7,458
2000	8,558	n/a	n/a	446	934	7,178	8,112
2001	8,641	n/a	n/a	471	742	7,428	8,170
2002	7,719	n/a	n/a	389	487	6,843	7,330
2003	6,434	n/a	n/a	440	411	5,583	5,994
2004	6,816	n/a	n/a	568	555	5,693	6,248
2005	8,667	n/a	n/a	712	749	7,205	7,954
2006	10,367	n/a	n/a	722	853	8,792	9,645
2007	11,941	n/a	n/a	712	1,001	10,227	11,228
2008	13,348	n/a	n/a	836	1,172	11,340	12,513
2009	9,082	n/a	n/a	389	872	7,821	8,693
2010	7,875	n/a	n/a	368	724	6,782	7,506
2011	8,266	n/a	n/a	368	831	7,068	7,898
2012	8,017	n/a	n/a	374	867	6,776	7,643
2013	11,069	n/a	n/a	456	1,358	9,255	10,613

Source: GAMA



1.7 U.S.-Manufactured General Aviation Airplane Exports by Type and Billings (1978–2013)

Year	Single-Engine Piston	Multi-Engine Piston	Turboprop	Business Jet	Total Airplanes Exported		Billings Exported	
					Units	% of Shipments	(in \$ Millions)	% of Total Billings
1978	2,712	652	166	82	3,612	20.3%	\$486.7	27.3%
1979	2,942	774	181	98	3,995	23.4%	\$600.9	27.8%
1980	2,565	635	245	110	3,555	29.9%	\$756.4	30.4%
1981	1,546	363	259	102	2,270	24.0%	\$749.0	25.7%
1982	718	227	135	82	1,162	27.2%	\$650.2	32.5%
1983	298	119	66	30	513	19.1%	\$316.5	21.5%
1984	199	79	25	31	334	13.7%	\$260.7	15.5%
1985	208	69	49	28	354	17.4%	\$230.0	16.1%
1986	272	69	68	32	441	29.5%	\$343.6	27.2%
1987	252	60	78	49	439	40.5%	\$469.3	34.4%
1988	220	52	91	62	425	37.2%	\$626.8	32.7%
1989	385	46	78	57	566	36.9%	\$587.0	32.5%
1990	224	57	86	91	458	40.0%	\$872.2	43.4%
1991	204	25	74	79	382	37.4%	\$807.0	41.0%
1992	196	16	90	51	353	39.0%	\$608.7	33.0%
1993	149	23	109	68	349	36.2%	\$856.8	40.0%
1994	84	42	84	67	277	29.8%	\$684.2	29.0%
1995	130	30	85	70	315	29.3%	\$815.9	28.7%
1996	126	24	135	60	345	30.5%	\$903.0	28.9%
1997	199	25	126	99	449	28.6%	\$1,504.6	32.2%
1998	268	30	131	106	535	24.1%	\$1,640.1	27.9%
1999	237	23	42	158	562	22.3%	\$2,503.8	31.6%
2000	285	24	112	148	569	20.2%	\$1,957.5	22.9%
2001	175	42	118	170	505	19.2%	\$2,380.6	27.5%
2002	135	23	79	136	372	16.8%	\$1,980.9	25.4%
2003	168	22	52	94	336	15.7%	\$1,218.2	18.9%
2004	181	9	55	88	333	14.1%	\$1,419.6	20.8%
2005	301	18	66	172	557	19.5%	\$2,585.9	29.8%
2006	535	30	74	252	891	28.3%	\$4,395.5	42.4%
2007	665	33	131	313	1,142	34.8%	\$4,587.0	38.4%
2008	556	40	175	410	1,161	37.7%	\$5,863.8	43.9%
2009	341	15	121	255	732	46.2%	\$4,612.7	50.8%
2010	299	45	151	194	689	51.6%	\$4,867.8	61.8%
2011	249	50	121	112	486	36.3%	\$4,585.8	55.5%
2012	263	40	243	174	720	47.7%	\$4,791.1	59.8%
2013	255	49	245	142	691	42.8%	\$5,616.9	50.7%

Source: GAMA

1.8 U.S. Civil Airplane Imports (2005–2011) Units and Dollar Value (in Millions)

	2005		2006		2007		2008		2009		2010		2011	
	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars
Single-Engine	313	\$255.5	394	\$334.4	388	\$304.7	376	\$456.0	200	\$310.6	212	\$272.6	171	\$273.0
Multi-Engine – Under 4,400 lbs	0	-	37	\$17.5	81	\$37.7	37	\$17.2	11	\$6.0	4	\$2.8	3	\$1.8
Multi-Engine – 4,400–10,000 lbs	13	\$57.2	19	\$87.8	20	\$105.4	20	\$104.1	71	\$263.7	50	\$160.7	32	\$138.6
Multi-Engine – Turbojet/ Turboprop 10,000–33,000 lbs	184	\$3,367.0	189	\$3,496.0	219	\$3,998.3	188	\$3,489.2	82	\$1,684.3	86	\$1,657.4	115	\$2,084.3
Multi-Engine (Other Including Turbohaft) 10,000–33,000 lbs.	2	\$6.2	6	\$50.7	4	\$69.5	-	-	3	\$72.8	5	\$97.1	7	\$169.4
Total	512	\$3,679.8	645	\$3,986.3	712	\$4,515.7	621	\$4,066.4	367	\$2,337.4	357	\$2,190.8	328	\$2,667.0

Note: 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

1.9 European-Manufactured General Aviation Airplane Shipments by Type (2003–2013)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine	Companies Reporting	Factory Net Billings (\$ Millions)
2011	468	204	70	274	121	73	194	7	\$3,988
2012	446	231	28	259	112	75	187	8	\$4,063
2013	452	235	22	257	112	83	195	8	\$4,505

An aircraft is considered manufactured in Europe when produced under an EASA production approval. EASA rules require production approvals for all aircraft including CS-VLA and CS-SLSA models.

Source: GAMA



General Aviation Fleet and Flight Activity and Forecast



2.1 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Primary Use and Aircraft Type (2012)

Aircraft Type	Total Active (75.5%)	General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
		Personal	Business	Corporate	Instruc-tional	Aerial Apps.	Aerial Obs.	Aerial Other	External Load	Other Work	Sight-seeing	Air Medical	Other	Air Taxi	Air Tours	Air Medical
Total All Aircraft	209,034	141,317	17,542	9,392	12,838	3,606	5,294	774	405	910	1,097	296	6,180	7,117	470	1,798
% Std. Error	1.4%	2.1%	1.7%	1.0%	1.7%	1.2%	1.2%	0.9%	0.7%	1.5%	1.3%	1.1%	1.3%	0.7%	0.7%	0.5%
Piston Total	143,160	106,885	13,885	1,148	10,394	1,378	2,515	217	0	524	369	123	3,649	1,920	118	36
One-Engine Piston	128,847	99,375	10,839	402	9,370	1,348	2,194	114	0	489	352	84	3,187	994	91	8
Two-Engine Piston	14,313	7,510	3,046	745	1,024	30	322	103	0	35	17	39	462	926	27	27
Turboprop Total	10,304	1,852	1,617	2,026	139	1,579	393	239	36	153	2	27	369	1,627	35	210
One-Engine Turboprop	5,090	1,201	916	445	53	1,569	49	46	36	42	2	12	117	524	35	43
Two-Engine Turboprop	5,215	651	701	1,581	86	10	344	193	0	112	0	15	252	1,103	0	168
Business Jet	11,793	1,133	1,054	5,896	27	0	26	14	0	13	0	23	678	2,780	0	149
Rotorcraft Total	10,055	1,216	377	245	1,273	537	2,134	290	369	81	148	110	880	717	281	1,399
Piston Total	3,292	941	246	25	1,110	241	213	19	16	10	111	0	269	77	16	0
Turbine Total	6,763	276	131	221	162	296	1,921	271	352	71	37	110	611	641	265	1,399
- One-Engine Turbine	5,100	252	91	105	117	290	1,888	236	278	65	36	36	227	474	259	746
- Two-Engine Turbine	1,663	23	40	116	46	6	33	35	75	6	1	74	384	166	6	653
Gliders	1,820	1,510	12	0	240	0	0	0	0	0	50	0	9	0	0	0
Lighter-Than-Air	3,186	2,364	98	0	57	17	0	0	0	91	495	0	28	0	36	0
Experimental Total	26,715	24,764	443	76	424	96	206	13	0	46	29	14	527	72	0	4
Amateur-Built	18,843	17,963	307	2	261	0	86	2	0	4	2	0	217	0	0	0
Exhibition	1,923	1,734	19	2	25	0	2	0	0	6	0	0	135	0	0	0
Exp. Light-Sport	4,631	4,360	12	0	104	0	74	0	0	10	16	0	55	0	0	0
Other Experimental	1,317	707	105	72	35	96	44	11	0	26	12	14	120	72	0	4
Special Light-Sport	2,001	1,592	57	0	285	0	20	0	0	2	4	0	41	0	0	0

Source: FAA Survey

2.2 U.S. General Aviation and On-Demand Part 135 Total Hours Flown (in Thousands) by Use and Aircraft Type (2012)

Aircraft Type	Total Hours	General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
		Personal	Business	Corporate	Instruc-tional	Aerial Apps.	Aerial Obs.	Aerial Other	External Load	Other Work	Sight-seeing	Air Medical	Other	Air Taxi	Air Tours	Air Medical
Total All Aircraft	24,403	8,185	2,126	2,365	3,727	956	1,325	196	209	261	166	104	1,261	2,446	348	728
% Std. Error	1.1%	1.8%	2.4%	3.6%	3.2%	5.8%	5.0%	8.7%	12.6%	8.8%	9.0%	19.1%	3.3%	5.0%	13.9%	6.7%
Piston Total	13,206	6,337	1,439	172	3,042	224	622	33	-	143	61	35	533	504	51	10
One-Engine Piston	11,441	5,813	1,127	46	2,694	221	542	15	-	130	58	15	465	269	42	2
Two-Engine Piston	1,765	524	312	125	348	3	81	17	-	12	3	19	68	236	9	8
Turboprop Total	2,733	235	228	406	84	567	179	68	0	45	0	13	197	611	15	86
One-Engine Turboprop	1,371	139	122	123	26	565	14	11	0	16	0	8	64	248	15	19
Two-Engine Turboprop	1,362	95	107	283	57	1	166	57	-	29	0	5	133	363	0	67
Business Jet	3,418	268	319	1,697	26	-	6	3	0	3	0	13	287	720	0	75
Rotorcraft Total	3,454	108	83	69	473	142	493	90	208	59	62	37	201	597	279	554
Piston Total	731	68	25	5	407	36	71	2	5	6	47	-	29	17	14	0
Turbine Total	2,723	40	57	64	66	106	422	88	203	54	15	37	171	580	265	554
- One-Engine Turbine	2,131	35	35	28	48	98	407	74	171	45	15	16	116	508	260	274
- Two-Engine Turbine	592	5	23	36	18	7	15	13	31	9	0	21	55	72	5	279
Gliders	91	55	1	-	18	-	-	-	-	4	10	-	3	-	-	-
Lighter-Than-Air	89	48	3	0	2	0	-	-	-	2	30	-	1	-	1	-
Experimental Total	1,243	1,034	49	20	23	24	23	2	-	5	3	7	35	14	-	4
Amateur-Built	847	776	32	0	14	-	8	0	-	1	0	-	15	-	-	-
Exhibition	88	77	1	0	1	-	1	-	-	0	0	0	6	-	-	-
Exp. Light-Sport	151	139	2	-	3	-	2	-	-	1	1	-	3	-	-	-
Other Experimental	157	42	14	20	5	24	12	2	-	2	2	7	10	14	-	4
Special Light-Sport	169	99	5	-	58	-	2	-	-	0	0	-	5	-	-	-

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) flying;
- corporate and executive flying (that is, flying with a paid, professional crew); and
- business transportation (that is, an individual using an airplane for business without a paid, professional crew).

In addition, the following **forms of business operations** are included in general aviation operations:

- instructional flying (operations under the supervision of a flight instructor including solo flight);
- sightseeing (commercial sightseeing operations under FAR Part 91); and
- on-demand FAR Part 135 operations including air taxi (that is, charter), air tours, and air medical operations.

2.3 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Type (1980–2012) and Forecast (2013–2033)

Calendar Year	Total Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft		
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Experimental	Special
1980	211,039	193,012	4,089	2,992	2,794	3,207	4,945	-	-	-	-
1981	213,219	193,367	4,659	3,170	3,250	3,724	5,049	-	-	-	-
1982	209,778	189,195	5,186	3,996	2,419	3,749	5,233	-	-	-	-
1983	213,292	191,479	5,453	3,898	2,541	3,998	5,923	-	-	-	-
1984	220,941	197,442	5,808	4,320	2,936	4,160	6,275	-	-	-	-
1985	210,853	188,191	5,607	4,374	2,877	3,541	6,263	-	-	-	-
1986	219,325	195,647	5,244	4,481	2,921	4,022	7,010	-	-	-	-
1987	217,202	194,454	5,274	4,358	2,813	3,520	6,783	-	-	-	-
1988	210,246	187,536	5,259	4,188	2,584	3,822	6,857	-	-	-	-
1989	219,738	193,815	6,324	4,402	3,244	4,232	7,721	-	-	-	-
1990	212,230	187,774	5,652	4,375	3,459	3,938	7,032	-	-	-	-
1991	196,874	173,518	4,941	4,126	2,390	3,848	8,051	-	-	-	-
1992	185,650	162,881	4,786	4,004	2,348	3,631	8,000	-	-	-	-
1993	177,120	149,156	4,116	3,663	1,846	2,875	5,037	10,426	-	-	-
1994	172,935	142,152	4,092	3,914	1,627	3,101	5,906	12,144	-	-	-
1995	188,089	152,788	4,995	4,559	1,863	3,967	4,741	15,176	-	-	-
1996	191,129	153,551	5,716	4,424	2,507	4,063	4,244	16,625	-	-	-
1997	192,414	156,056	5,619	5,178	2,259	4,527	4,092	14,680	-	-	-
1998	204,710	162,963	6,174	6,066	2,545	4,881	5,580	16,502	-	-	-
1999	219,464	171,923	5,679	7,120	2,564	4,884	6,765	20,528	-	-	-
2000	217,534	170,513	5,762	7,001	2,680	4,470	6,701	20,407	-	-	-
2001	211,446	163,314	6,596	7,787	2,292	4,491	6,545	20,421	-	-	-
2002	211,244	161,087	6,841	8,355	2,351	4,297	6,377	21,936	-	-	-
2003	209,708	160,938	7,689	7,997	2,123	4,403	6,008	20,550	-	-	-
2004	219,426	165,189	8,379	9,298	2,315	5,506	5,939	22,800	-	-	-
2005	224,352	167,608	7,942	9,823	3,039	5,689	6,454	23,627	170	-	-
2006	221,942	163,743	8,063	10,379	3,264	5,895	6,278	23,047	1,273	-	-
2007	231,607	166,907	9,514	10,385	2,769	6,798	5,940	23,228	6,066	-	-
2008	228,663	163,013	8,906	11,042	3,498	6,378	5,652	23,364	6,811	-	-
2009	223,877	157,123	9,055	11,268	3,499	6,485	5,480	24,419	6,547	5,077	1,470
2010	223,370	155,419	9,369	11,484	3,588	6,514	5,684	24,784	6,528	4,878	1,650
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2012	209,034	143,160	10,304	11,793	3,292	6,763	5,006	26,715	-	4,631	2,001
Forecast											
2013	221,085	150,535	9,830	12,230	3,865	7,130	5,670	24,750	7,075	-	-
2014	221,585	149,615	9,990	12,640	3,970	7,375	5,660	25,075	7,260	-	-
2015	222,165	148,740	10,150	13,075	4,075	7,630	5,655	25,415	7,425	-	-
2016	222,705	147,895	10,315	13,525	4,185	7,890	5,645	25,665	7,585	-	-
2017	223,315	147,070	10,475	13,980	4,295	8,155	5,640	25,960	7,740	-	-
2018	223,920	146,260	10,650	14,420	4,400	8,415	5,635	26,250	7,890	-	-
2019	224,630	145,485	10,830	14,875	4,500	8,670	5,630	26,585	8,055	-	-
2020	225,340	144,745	11,015	15,350	4,595	8,925	5,620	26,880	8,210	-	-
2021	226,155	144,050	11,200	15,850	4,690	9,180	5,610	27,215	8,360	-	-
2022	226,970	143,405	11,395	16,355	4,785	9,435	5,610	27,460	8,525	-	-
2023	227,915	142,805	11,595	16,895	4,885	9,705	5,605	27,745	8,680	-	-
2024	229,060	142,285	11,810	17,490	4,990	9,980	5,590	28,085	8,830	-	-
2025	230,360	141,875	12,015	18,120	5,095	10,260	5,585	28,415	8,995	-	-
2026	231,755	141,550	12,235	18,800	5,200	10,540	5,585	28,695	9,150	-	-
2027	233,355	141,340	12,450	19,520	5,305	10,825	5,580	29,030	9,305	-	-
2028	235,080	141,200	12,665	20,285	5,415	11,110	5,575	29,370	9,460	-	-
2029	236,950	141,195	12,875	21,080	5,525	11,400	5,560	29,695	9,620	-	-
2030	238,985	141,330	13,095	21,915	5,635	11,695	5,555	29,985	9,775	-	-
2031	241,220	141,605	13,305	22,775	5,745	11,990	5,555	30,315	9,930	-	-
2032	243,670	142,050	13,525	23,670	5,855	12,285	5,550	30,645	10,090	-	-
2033	246,375	142,690	13,740	24,620	5,970	12,585	5,545	30,980	10,245	-	-
Avg Annual Growth											
2012-33	0.5%	-0.3%	1.7%	3.5%	2.2%	2.9%	-0.1%	1.1%	2.0%	-	-

Source: FAA Survey and Forecast

2.4 U.S. General Aviation and On-Demand Part 135 Estimated Hours Flown (in Thousands) by Type (1980–2012) and Forecast (2013–2033)

Calendar Year	Total Hours	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft		
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Experimental	Special
1980	41,016	34,747	2,240	1,332	736	1,603	359	-	-	-	-
1981	40,704	34,086	2,155	1,387	930	1,754	391	-	-	-	-
1982	36,457	29,950	2,168	1,611	579	1,771	379	-	-	-	-
1983	35,249	28,911	2,173	1,473	572	1,700	420	-	-	-	-
1984	36,119	29,194	2,506	1,566	592	1,903	358	-	-	-	-
1985	31,456	25,666	1,921	1,498	521	1,468	382	-	-	-	-
1986	31,782	24,805	2,661	1,527	742	1,682	364	-	-	-	-
1987	30,883	24,969	2,010	1,411	602	1,506	384	-	-	-	-
1988	31,114	24,291	2,195	1,554	533	1,974	568	-	-	-	-
1989	32,332	24,907	2,892	1,527	692	1,918	396	-	-	-	-
1990	32,096	25,832	2,319	1,396	716	1,493	341	-	-	-	-
1991	29,862	23,919	1,628	1,071	549	2,214	483	-	-	-	-
1992	26,747	21,417	1,582	1,076	423	1,842	407	-	-	-	-
1993	24,455	19,321	1,192	1,212	391	1,308	338	785	-	-	-
1994	24,092	18,823	1,142	1,238	369	1,408	388	724	-	-	-
1995	26,612	20,251	1,490	1,455	337	1,624	261	1,194	-	-	-
1996	26,909	20,091	1,768	1,543	591	1,531	227	1,158	-	-	-
1997	27,713	20,744	1,655	1,713	344	1,740	192	1,327	-	-	-
1998	28,100	20,402	1,765	2,226	430	1,912	295	1,071	-	-	-
1999	31,231	22,529	1,797	2,721	552	2,077	309	1,246	-	-	-
2000	29,960	21,493	1,986	2,648	530	1,661	362	1,280	-	-	-
2001	27,017	19,194	1,773	2,654	474	1,479	287	1,157	-	-	-
2002	27,040	18,891	1,850	2,745	454	1,422	333	1,345	-	-	-
2003	27,329	19,013	1,922	2,704	448	1,687	263	1,292	-	-	-
2004	28,126	18,142	2,161	3,718	514	2,020	249	1,322	-	-	-
2005	26,982	16,434	2,106	3,771	617	2,439	267	1,339	9	-	-
2006	27,705	16,525	2,162	4,077	918	2,528	211	1,218	66	-	-
2007	27,852	16,257	2,661	3,938	704	2,541	215	1,275	260	-	-
2008	26,009	15,074	2,457	3,600	751	2,470	209	1,155	293	-	-
2009	23,763	13,634	2,215	3,161	755	2,248	178	1,286	286	171	115
2010	24,802	13,979	2,325	3,375	794	2,611	181	1,226	311	173	138
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2012	24,403	13,206	2,733	3,418	731	2,723	180	1,243	-	151	169
Forecast											
2013	24,673	13,007	2,424	3,970	832	2,599	183	1,312	346	-	-
2014	24,795	12,652	2,506	4,179	857	2,660	183	1,396	363	-	-
2015	24,973	12,360	2,589	4,400	881	2,723	184	1,457	378	-	-
2016	25,200	12,089	2,674	4,631	907	2,805	185	1,515	394	-	-
2017	25,534	11,913	2,759	4,859	934	2,894	186	1,579	410	-	-
2018	25,874	11,780	2,835	5,093	959	2,981	186	1,612	427	-	-
2019	26,193	11,654	2,901	5,308	983	3,066	187	1,649	444	-	-
2020	26,532	11,553	2,959	5,531	1,005	3,151	188	1,684	462	-	-
2021	26,866	11,458	3,011	5,756	1,028	3,235	188	1,714	475	-	-
2022	27,255	11,413	3,065	5,985	1,051	3,325	189	1,738	489	-	-
2023	27,623	11,364	3,119	6,191	1,075	3,417	190	1,765	503	-	-
2024	28,079	11,374	3,173	6,419	1,101	3,510	191	1,795	517	-	-
2025	28,560	11,406	3,226	6,648	1,126	3,606	191	1,825	532	-	-
2026	29,048	11,430	3,279	6,893	1,151	3,704	192	1,853	546	-	-
2027	29,619	11,512	3,333	7,156	1,177	3,803	193	1,884	561	-	-
2028	30,190	11,575	3,388	7,434	1,203	3,905	194	1,915	576	-	-
2029	30,780	11,642	3,441	7,726	1,230	4,009	194	1,946	592	-	-
2030	31,415	11,741	3,495	8,029	1,256	4,117	195	1,975	607	-	-
2031	32,086	11,859	3,548	8,342	1,282	4,230	196	2,006	623	-	-
2032	32,808	12,009	3,603	8,669	1,309	4,345	197	2,039	639	-	-
2033	33,576	12,174	3,657	9,012	1,337	4,471	197	2,071	656	-	-
Avg Annual Growth											
2012–33	1.5%	-0.5%	2.1%	4.3%	2.4%	2.7%	0.4%	2.5%	3.3%	-	-

The FAA started publishing data for special light-sport aircraft separately in 2009. 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 registration.
- 2009: The FAA began publishing data for special light-sport aircraft separately.
- 2011: Data is unavailable at the time of publication.
- 2012: The general aviation survey results includes "Experimental Light-Sport" data in the "Experimental" category.

Source: FAA Survey and Forecast

2.5 Active U.S. General Aviation and On-Demand FAR Part 135 Average Hours Flown by Aircraft by Year (1998–2012)

Calendar Year	All Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft	
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Special
1998	137	125	286	367	169	392	53	65	-	-
1999	145	133	319	385	217	448	47	61	-	-
2000	142	130	353	393	198	398	56	64	-	-
2001	138	128	290	341	254	347	50	59	-	-
2002	128	117	270	329	193	331	53	61	-	-
2003	130	118	250	338	211	383	44	63	-	-
2004	128	110	258	400	222	367	42	58	-	-
2005	120	98	265	384	203	429	41	57	55	-
2006	125	101	268	393	281	429	34	53	52	-
2007	120	97	280	379	254	374	36	55	43	-
2008	114	93	276	326	215	387	37	50	43	-
2009	106	87	245	281	216	347	32	53	44	78
2010	111	90	248	294	221	401	32	50	48	84
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	n/a
2012	117	92	265	290	222	403	36	47	-	85

Source: FAA Survey



2.6 Active General Aviation and On-Demand FAR Part 135 Aircraft and Hours Flown (in Thousands) by U.S. State or Territory (2006-2012)

State or Territory	2006		2007		2008		2009		2010		2012		
	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Aircraft Population	Active Aircraft	Hours Flown
Alabama	4,477	437	3,719	372	3,549	546	3,145	299	5,095	643	5,476	4,763	527
Alaska	6,201	734	6,111	783	6,076	701	6,017	688	6,113	681	8,399	5,703	696
Arizona	6,438	1,141	7,636	807	5,767	579	6,896	809	7,531	1,135	7,802	6,070	666
Arkansas	2,382	298	2,575	338	2,291	354	2,661	346	3,028	354	4,149	3,053	366
California	23,854	3,201	23,813	2,540	25,292	2,651	24,811	2,555	22,830	2,350	27,900	21,316	2,309
Colorado	5,623	596	5,441	663	6,268	626	4,973	525	5,483	716	7,242	5,412	772
Connecticut	2,090	401	2,296	380	2,228	445	1,868	355	1,566	201	2,047	1,657	281
Delaware	2,409	413	2,494	410	1,830	313	2,261	221	1,934	220	2,859	1,885	212
District of Columbia	34	14	41	15	29	88	80	4	17	4	422	415	107
Florida	14,226	1,662	16,341	2,198	16,143	2,382	16,804	2,047	16,126	1,839	18,562	14,754	1,958
Georgia	5,762	679	4,758	568	6,674	709	5,970	805	5,843	618	6,578	5,228	566
Hawaii	619	249	531	106	530	93	499	148	741	179	626	486	203
Idaho	2,786	324	2,747	319	2,816	234	3,282	300	2,860	204	3,752	2,966	301
Illinois	5,841	698	6,872	723	5,480	423	6,786	655	6,112	574	6,810	5,202	444
Indiana	3,909	363	4,862	358	3,764	294	4,008	412	3,151	255	5,239	3,675	266
Iowa	2,798	262	2,982	298	3,361	294	2,935	281	2,629	232	3,863	3,064	371
Kansas	3,393	421	3,044	442	3,814	397	3,805	366	3,547	344	4,462	3,138	543
Kentucky	1,497	131	2,073	186	1,726	131	1,780	137	2,082	157	2,298	1,934	159
Louisiana	2,393	651	2,857	756	3,136	777	2,970	913	3,512	862	4,077	3,264	1,017
Maine	948	101	1,463	128	1,284	112	1,230	81	1,347	86	1,585	1,188	107
Maryland	2,317	288	2,699	309	2,671	248	2,971	176	2,774	235	3,034	2,505	274
Massachusetts	2,655	275	2,738	317	2,417	310	2,539	224	2,426	244	3,329	2,663	477
Michigan	6,229	611	6,443	512	8,668	572	6,068	477	6,112	471	7,819	5,663	468
Minnesota	5,414	535	5,086	552	4,840	453	5,187	413	4,690	415	5,852	4,365	383
Mississippi	2,159	334	1,939	381	1,298	233	2,237	296	2,543	354	2,491	2,037	300
Missouri	4,312	489	4,616	376	3,596	272	4,119	412	3,847	303	5,648	3,953	399
Montana	2,911	260	3,110	349	2,152	239	2,576	188	2,536	164	3,188	1,755	158
Nebraska	2,057	308	2,127	255	2,074	201	2,314	197	2,076	183	2,494	2,013	191
Nevada	3,374	625	3,512	573	3,093	377	2,022	276	2,030	343	3,155	2,246	319
New Hampshire	1,320	139	1,425	107	1,624	150	1,361	123	1,316	148	1,569	1,187	103
New Jersey	3,683	476	3,369	315	4,076	742	3,232	331	2,954	315	3,014	2,379	294
New Mexico	3,375	334	4,221	461	3,519	276	2,663	190	3,411	246	3,440	2,562	201
New York	5,829	528	5,661	600	6,074	549	5,577	463	6,457	787	7,232	5,116	478
North Carolina	6,106	744	5,917	928	5,376	644	6,004	637	5,883	723	7,085	5,451	463
North Dakota	1,533	183	1,236	171	1,276	348	1,101	106	1,366	217	2,040	1,376	341
Ohio	7,108	788	6,189	741	6,200	700	6,329	608	5,823	631	8,463	6,319	578
Oklahoma	4,734	1,018	4,021	841	4,911	794	4,229	809	4,794	910	5,571	3,915	566
Oregon	4,800	558	6,029	725	4,614	431	5,234	559	5,200	784	6,229	4,692	653
Pennsylvania	5,865	620	5,881	624	7,410	851	6,539	652	6,012	662	7,428	5,386	562
Puerto Rico	182	57	348	54	620	78	319	50	397	154	424	345	36
Rhode Island	320	31	243	43	299	20	234	19	352	36	3,033	2,538	193
South Carolina	2,236	311	3,214	260	2,845	300	2,425	189	2,634	205	2,010	1,478	153
South Dakota	1,293	135	1,143	151	1,554	112	1,843	176	1,024	96	4,701	3,557	429
Tennessee	4,156	516	4,286	524	4,438	559	3,820	315	3,993	362	24,004	18,500	2,140
Texas	18,415	2,276	20,235	2,450	18,117	2,071	19,416	2,042	17,595	2,039	3,197	2,601	433
Utah	1,856	340	2,057	386	2,583	443	1,859	262	2,298	325	750	545	30
Vermont	636	71	431	39	628	35	553	35	603	49	5,827	4,451	549
Virginia	4,809	538	4,642	703	5,605	691	3,961	376	5,178	645	9,996	7,249	679
Washington	7,042	769	7,722	949	7,198	691	6,604	614	7,585	602	1,200	855	47
West Virginia	957	65	1,101	82	1,247	95	1,160	97	1,292	80	6,356	4,485	352
Wisconsin	5,290	482	5,872	487	3,911	297	5,134	376	5,694	318	1,392	1,010	120
Wyoming	1,241	158	1,287	167	1,493	144	1,299	118	836	88	672	492	124
Other US Territories	-	10	154	32	182	15	166	10	-	-	218	174	44
Grand Total	221,943	27,705	231,607	27,854	228,663	26,009	223,877	23,763	223,370	24,802	277,010	209,034	24,403

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. Data for 2011 is unavailable at the time of publication.

Source: FAA Survey

2.7 Experimental Fleet Estimated Active Aircraft (1994–2012)

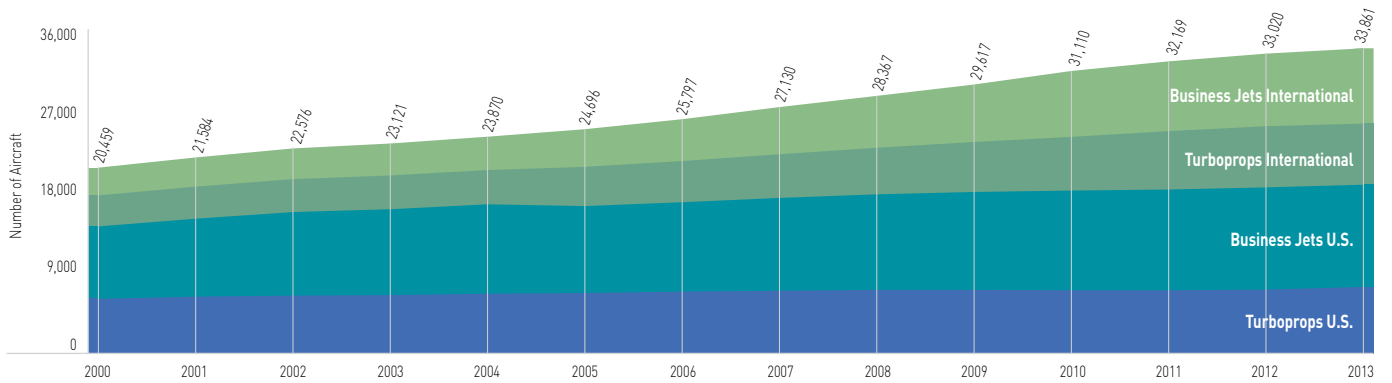
	1994	1995	1996	1997	1998	1999	2000	2001	2002
Amateur-Built	8,833	9,328	11,566	10,261	13,189	16,858	16,739	16,736	18,168
Exhibition	637	2,245	2,094	1,798	1,630	1,999	1,973	2,052	2,190
Experimental Light-Sport	-	-	-	-	-	-	-	-	-
Other	2,674	3,603	2,965	2,620	1,684	1,671	1,694	1,633	1,578
Total Experimental	12,144	15,176	16,625	14,679	16,503	20,528	20,406	20,421	21,936
% of GA Fleet	7.0%	8.1%	8.7%	7.6%	8.1%	9.4%	9.4%	9.7%	10.4%

2.8 Estimated Hours Flown (in Thousands) of Experimental Aircraft Fleet (1994–2012)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Amateur-Built	391	482	524	698	729	883	887	794	976
Exhibition	44	260	192	246	73	122	113	102	127
Experimental Light-Sport	-	-	-	-	-	-	-	-	-
Other	289	452	442	382	269	242	279	261	242
Total Experimental	724	1,194	1,158	1,326	1,071	1,247	1,279	1,157	1,345
% of GA Fleet	3.0%	4.5%	4.3%	4.8%	3.8%	4.0%	4.3%	4.3%	5.0%

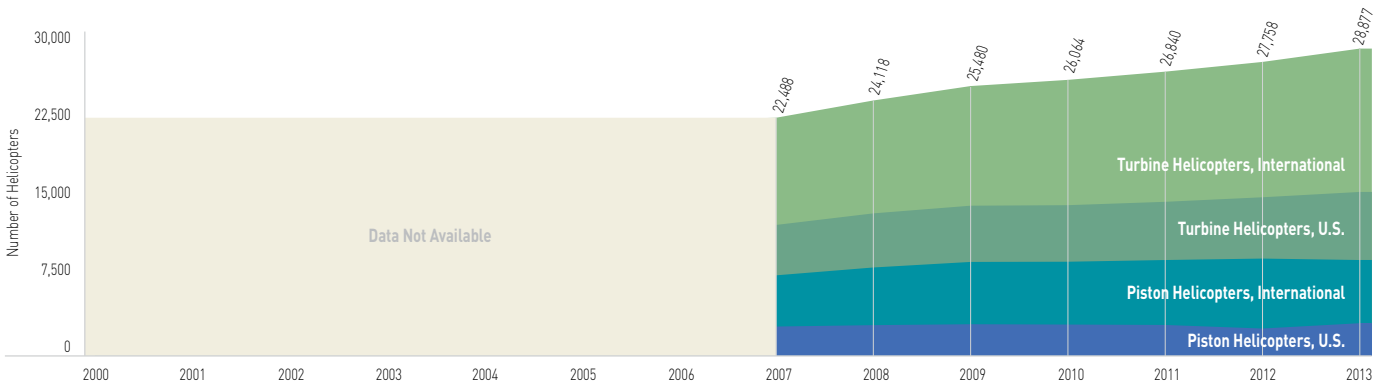
Beginning in 1994, "experimental" includes aircraft with an experimental airworthiness certificate. These include research and development, amateur-built, exhibition, racing, crew training, and market survey aircraft, and aircraft used to show compliance with the Federal Aviation Regulations.

FIGURE 2.1 Worldwide Turbine Business Airplane Fleet (2000–2013)



Source: JETNET LLC; www.JETNET.com

FIGURE 2.2 Worldwide Turbine and Piston Helicopter Fleet (2007–2013)



Source: JETNET LLC; www.JETNET.com

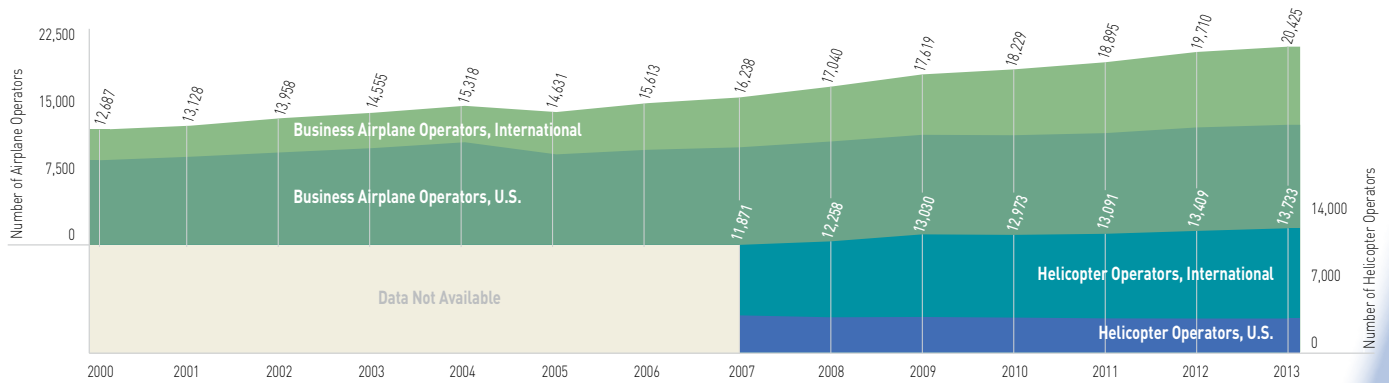
2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
17,028	19,165	19,817	19,316	19,538	19,767	20,794	21,270	n/a	18,843
2,031	2,070	2,120	2,103	2,101	2,096	2,063	2,029	n/a	1,923
-	-	-	-	-	-	5,077	4,878	n/a	4,631
1,491	1,565	1,691	1,629	1,589	1,501	1,562	1,485	n/a	1,317
20,550	22,800	23,628	23,048	23,228	23,364	29,496	29,662	n/a	26,715
9.8%	10.4%	10.5%	10.4%	10.0%	10.2%	13.2%	13.3%	n/a	12.8%

Source: FAA Survey

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
963	990	987	899	896	872	983	911	n/a	847
103	116	113	103	102	92	88	98	n/a	88
-	-	-	-	-	-	171	173	n/a	151
226	216	239	216	277	192	215	217	n/a	157
1,292	1,322	1,339	1,218	1,274	1,155	1,457	1,399	n/a	1,243
4.7%	4.7%	5.0%	4.4%	4.6%	4.4%	6.1%	5.6%	n/a	5.1%

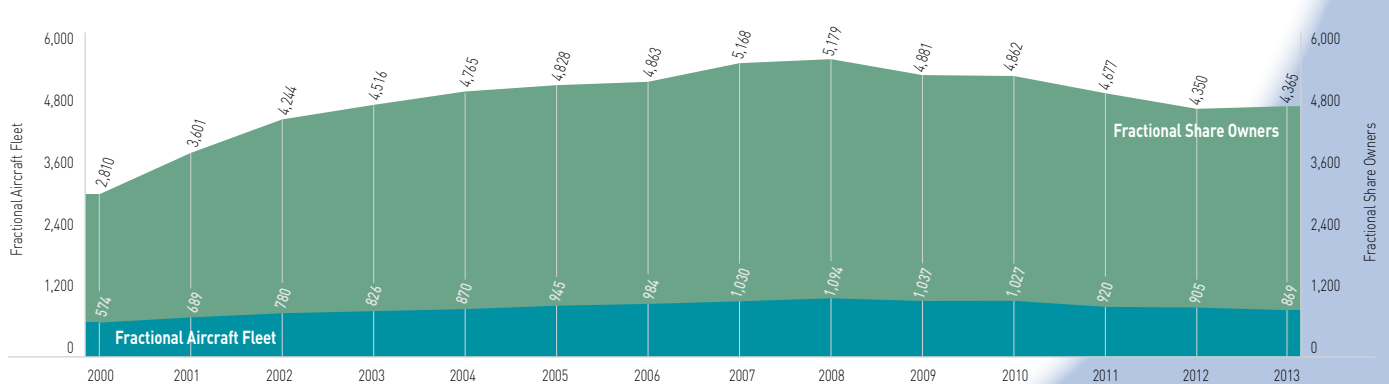
Source: FAA Survey

FIGURE 2.3 Worldwide Business Aircraft Operators (2000–2013)



Source: JETNET LLC; www.JETNET.com

FIGURE 2.4 Fractional Aircraft and Share Owners (2000–2013)



The fractional owner and fleet information for 2007 and later also includes helicopters.

Source: JETNET LLC; www.JETNET.com

2.9 Total Fuel Consumed and Average Fuel Consumption Rate by Aircraft Type Based on FAA's Survey (2012)

Fuel Type	Fixed-Wing			Rotorcraft		Other Aircraft	Experimental	Special Light-Sport	Total All Aircraft
	Piston	Turboprop	Turbojet	Piston	Turbine				
Jet Fuel									
Avg. Rate (GPH)	-	89.0	315.4	-	54.7	-	43.1	-	172.1
Estimated Fuel Use (Thousand Gal.)	-	201,720.9	1,135,576.7	-	141,849.2	-	12,825.8	-	1,492,120.0
% Standard Error	-	1.7%	1.9%	-	1.3%	-	10.9%	-	1.5%
100 Low Lead									
Avg. Rate (GPH)	13.1	36.6	-	14.0	-	4.1	9.8	5.3	13.1
Estimated Fuel Use (Thousand Gal.)	168,231.9	26,251.9	-	9,369.3	-	25.2	7,116.3	444.0	211,540.5
% Standard Error	2.1%	3.6%	-	2.7%	-	15.8%	2.7%	3.8%	2.0%
100 Octane									
Avg. Rate (GPH)	14.1	22.5	-	12.9	-	-	9.7	5.2	14.2
Estimated Fuel Use (Thousand Gal.)	15,206.5	126.2	-	142.8	-	-	217.0	29.4	16,150.3
% Standard Error	13.0%	14.1%	-	16.8%	-	-	14.1%	17.2%	12.8%
Automotive Gasoline									
Avg. Rate (GPH)	7.8	-	-	-	-	4.3	4.8	4.7	6.0
Estimated Fuel Use (Thousand Gal.)	2,440.4	-	-	-	-	6.9	1,620.1	369.7	4,437.1
% Standard Error	7.8%	-	-	-	-	17.6%	3.3%	4.2%	3.3%
Other Fuel									
Avg. Rate (GPH)	7.2	-	-	-	-	18.3	8.7	4.5	16.6
Estimated Fuel Use (Thousand Gal.)	113.6	-	-	-	-	1,791.8	77.1	1.5	1,984.0
% Standard Error	19.6	-	-	-	-	5.5	15.7	19.8	5.3
Total Fuel Use									
Avg. Rate (GPH)	12.9	76.4	315.1	14.0	54.7	17.6	10.5	5.0	34.3
Estimated Fuel Use (Thousand Gal.)	186,154.3	228,099.1	1,136,059.9	9,630.3	141,893.7	1,856.8	21,866.1	844.6	1,726,404.8
% Standard Error	2.2%	1.6%	1.9%	2.7%	1.3%	5.4%	8.7%	2.8%	3.0%

Some data points are suppressed or contain no reports of a type of aircraft using that fuel.

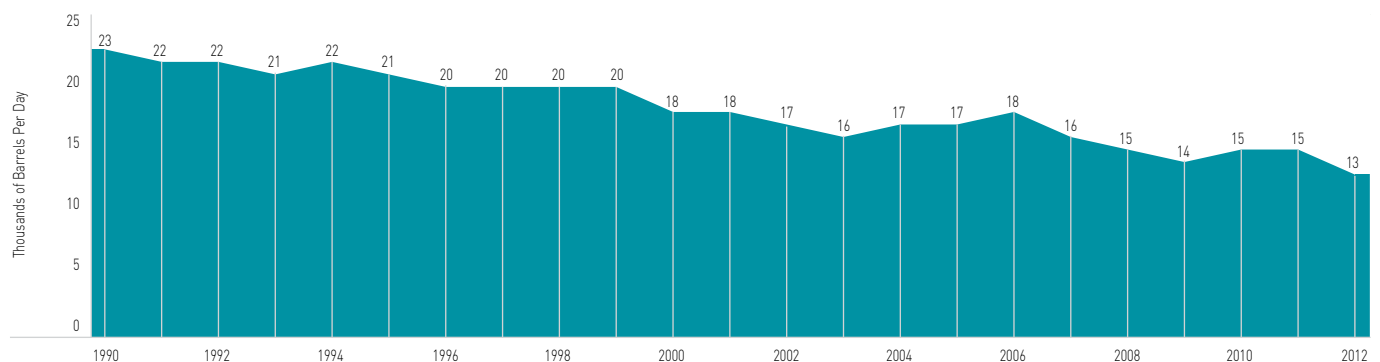
Source: FAA Survey

2.10 U.S. Refinery and Blender Net Production of Aviation Gasoline (1990–2012) (In Thousand Barrels Per Day)

Year	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
1990	23	22	22	21	22	21	20	20	20	20
2000	18	18	17	16	17	17	18	16	15	14
2010	15	15	13	-	-	-	-	-	-	-

Source: U.S. Energy Information Administration

FIGURE 2.5 Refinery and Blender Net Production of Aviation Gasoline (1990–2012)



Source: U.S. Energy Information Administration

2.11 General Aviation Fuel Consumption (2000–2012) and Forecast (2013–2033) in Millions of Gallons

Year	Airplane				Rotorcraft		Experimental and Other Aircraft	Light-Sport	Total Fuel Consumed		
	Piston		Turbine		Piston	Turbine			Avgas	Jet Fuel	Total
	Single-Engine	Multi-Engine	Turboprop	Business Jet							
2000	200.8	108.4	176.3	736.7	8.4	59.0	15.2	-	332.8	972.0	1,304.8
2001	180.4	76.4	149.1	726.7	7.2	42.6	15.3	-	279.2	918.3	1,197.6
2002	177.9	74.2	152.3	745.5	6.8	40.5	17.8	-	276.7	938.3	1,215.0
2003	181.8	66.7	154.5	729.0	6.8	48.8	17.1	-	272.4	932.3	1,204.7
2004	167.5	80.1	167.0	1,004.9	7.9	59.0	17.5	-	272.9	1,230.9	1,503.8
2005	173.1	89.7	196.1	1,181.3	14.6	149.2	17.7	-	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
2010	133.1	53.9	187.1	1,122.9	10.7	124.8	21.6	1.5	220.7	1,434.8	1,655.6
2011	129.3	52.9	188.0	1,181.8	10.5	120.8	21.3	1.5	215.5	1,490.7	1,706.2
2012	126.6	51.8	190.7	1,232.2	10.7	119.5	21.7	1.5	212.3	1,542.4	1,754.7
Forecast											
2013	122.6	51.3	194.1	1,295.9	11.0	121.9	23.1	1.6	209.5	1,612.0	1,821.5
2014	118.8	51.2	200.7	1,357.3	11.2	124.1	24.4	1.7	207.4	1,682.2	1,889.5
2015	115.3	50.5	207.4	1,421.8	11.5	126.4	25.5	1.8	204.7	1,755.7	1,960.3
2016	112.7	49.4	212.1	1,489.0	11.9	128.9	26.4	1.8	202.2	1,830.0	2,032.2
2017	111.0	48.8	218.8	1,554.7	12.2	132.4	27.5	1.9	201.5	1,905.8	2,107.3
2018	109.8	48.3	224.8	1,621.2	12.6	135.7	28.1	2.0	200.7	1,981.7	2,182.4
2019	108.5	47.9	230.1	1,681.3	12.9	139.5	28.7	2.1	200.1	2,050.8	2,251.0
2020	107.0	47.7	233.4	1,743.0	13.2	143.4	29.3	2.1	199.3	2,119.8	2,319.2
2021	105.0	46.9	235.2	1,796.0	13.4	145.7	29.6	2.2	197.1	2,177.0	2,374.0
2022	104.6	46.7	239.4	1,848.7	13.7	149.1	30.0	2.2	197.2	2,237.1	2,434.3
2023	104.3	46.2	243.6	1,893.1	14.0	152.4	30.4	2.3	197.3	2,289.1	2,486.4
2024	104.5	45.8	247.8	1,943.3	14.3	155.8	31.0	2.4	198.0	2,346.8	2,544.9
2025	103.9	45.6	251.9	1,992.4	14.7	160.0	31.5	2.4	198.1	2,404.4	2,602.5
2026	103.2	45.5	253.6	2,045.2	14.9	162.7	31.6	2.5	197.7	2,461.5	2,659.1
2027	103.4	45.6	255.2	2,102.1	15.3	166.3	32.2	2.5	199.0	2,523.5	2,722.5
2028	103.6	45.5	259.4	2,162.0	15.6	169.8	32.7	2.6	200.1	2,591.3	2,791.3
2029	103.8	45.4	263.5	2,224.4	15.9	174.4	33.2	2.7	201.1	2,662.2	2,863.3
2030	104.3	45.4	267.5	2,288.6	16.3	177.3	33.7	2.8	202.5	2,733.4	2,935.9
2031	105.0	45.5	271.6	2,353.8	16.6	182.1	34.3	2.8	204.2	2,807.6	3,011.8
2032	105.9	45.8	275.8	2,421.6	17.0	187.1	34.8	2.9	206.3	2,884.5	3,090.8
2033	106.9	46.1	280.0	2,492.4	17.3	192.6	35.4	3.0	208.7	2,964.9	3,173.6
Avg Annual Growth											
2012–33	-0.8%	-0.6%	1.8%	3.4%	2.3%	2.3%	2.4%	3.2%	-0.1%	3.2%	2.9%

Source: FAA Survey and Forecast

2.12 Average Age of Registered General Aviation Fleet (2005–2012)

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	Average Age in 2011 in Years	Average Age in 2012 in Years
Single-Engine	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	n/a	43.4
	Turboprop	All	13	10	14	13.6	16.1	15.2	n/a	14.9
	Jet	All	34	34	35	44.4	44.0	44.1	n/a	n/a
	Helicopter – Piston	All	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20.8
Helicopter – Turbine	All	n/a	n/a	n/a	n/a	n/a	n/a	n/a	22.9	
Multi-Engine	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	All	-	-	-	-	41.2	39.0	n/a
	Turboprop	All	25	26	27	28.8	28.0	27.0	n/a	26.1
	Jet	All	16	16	16	16.2	17.0	16.2	n/a	15.3
	Helicopter – Turbine	All	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.5
All Aircraft			34	35	35	39.3	39.5	37.3	n/a	35.1

Source: GAMA



2.13 U.S. General Aviation Operations (in Thousands) at FAA and Contract Towers (1992–2013)

Year	General Aviation Operations at Towers						Grand Total
	FAA Control 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
2012	16,265	10,111	6,154	11,878	6,479	5,399	28,143
2013	16,027	9,857	6,170	11,998	6,438	5,560	28,025

Location operations at FAA Control Towers captures all civil local operations.

Facilities include Control Towers, TRACONs, CERAPs, and RAPCONs.
Traffic Count for GA Operation Data provided by ATADS.

Source: FAA Air Traffic Activity

2.14 Summary of U.S. General Aviation Operations and Contacts (in Thousands) at FAA Facilities (1998–2013)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013E
GA IFR Aircraft Handled at FAA Air Route Traffic Control Centers	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	6,550.3	6,557.3	6,472.1	6,475.6
GA Instrument Operations at FAA & Contract Facilities	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 Total 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	15,763.0	14,151.1	13,863.6	13,503.1	13,423.6	13,015.6
Total Aircraft Contacts at FSS	2,600.0	2,524.0	2,438.0	2,196.0	2,170.0	2,050.0	1,976.0	-	-	-	-	-	-	-	-	-

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

Pilot and Airman Certificates

3.1 Active FAA Certificated Pilots (1960–2013)

Year	Pilots		Students ⁷	Rec. ⁵	Sport ⁶	Airplane ¹			Rotorcraft (Only)	Glider (Only) ²	Lighter- Than-Air	Flight Instructor ³	Instrument Ratings ^{3,4}	
	Total	% Women				Private	Commercial	ATP					Total	% of Total
1960	348,062	2.86%	99,182	-	-	138,869	89,904	18,279	616	802	410	31,459	63,264	25.4%
1961	352,860	2.90%	93,973	-	-	144,312	92,976	19,155	677	894	873	30,165	68,092	26.3%
1962	365,971	2.87%	95,870	-	-	149,405	96,047	20,032	738	967	2,912	28,873	72,920	27.0%
1963	378,700	3.10%	105,298	-	-	152,209	96,341	20,269	823	1,045	2,715	29,618	74,451	27.2%
1964	431,041	3.39%	120,743	-	-	175,574	108,428	21,572	1,058	1,227	2,439	32,158	84,442	27.2%
1965	479,770	3.66%	139,172	-	-	196,393	116,665	22,440	1,392	1,411	2,297	34,904	93,637	27.5%
1966	548,757	3.69%	165,177	-	-	222,427	131,539	23,917	1,819	1,602	2,276	38,897	107,171	27.9%
1967	617,931	3.83%	181,287	-	-	253,312	150,135	25,817	2,573	1,866	2,941	44,421	122,573	28.1%
1968	691,695	4.11%	209,406	-	-	281,728	164,458	28,607	3,166	2,193	2,137	30,361	139,346	28.9%
1969	720,028	4.57%	203,520	-	-	299,491	176,585	31,442	4,286	2,627	2,077	33,992	155,879	30.2%
1970	732,729	4.52%	195,861	-	-	303,779	186,821	34,430	6,677	3,114	2,047	37,822	169,848	31.6%
1971	741,009	4.66%	186,428	-	-	312,656	192,409	35,949	7,992	3,571	2,004	37,760	179,261	32.3%
1972	750,869	4.40%	181,477	-	-	321,413	196,228	37,714	7,987	4,080	1,970	37,858	187,909	33.0%
1973	714,607	4.81%	181,905	-	-	298,921	182,444	38,139	5,968	4,288	2,942	36,795	185,969	34.9%
1974	733,728	5.03%	180,795	-	-	305,848	194,425	41,002	5,647	4,824	3,187	42,418	199,323	36.0%
1975	728,187	5.21%	176,978	-	-	305,863	189,342	42,592	4,932	5,348	3,132	44,777	203,954	37.0%
1976	744,246	5.60%	188,801	-	-	309,005	187,801	45,072	4,804	5,789	2,974	46,236	211,364	38.1%
1977	783,932	6.03%	203,510	-	-	327,424	188,763	50,149	4,819	6,208	3,059	49,362	226,334	39.0%
1978	798,833	6.24%	204,874	-	-	337,644	185,833	55,881	4,874	6,541	3,186	52,201	236,312	39.8%
1979	814,667	6.35%	210,180	-	-	343,276	182,097	63,652	5,218	6,796	3,448	54,398	247,096	40.9%
1980	827,071	6.40%	199,833	-	-	357,479	183,442	69,569	6,030	7,039	3,679	60,440	260,461	41.5%
1981	764,182	6.24%	179,912	-	-	328,562	168,580	70,311	6,453	7,388	2,976	57,523	252,535	43.2%
1982	733,255	6.18%	156,361	-	-	322,094	165,093	73,471	7,034	7,842	1,360	62,492	255,073	44.2%
1983	718,004	6.08%	147,197	-	-	318,643	159,495	75,938	7,237	8,157	1,337	62,201	254,271	44.5%
1984	722,376	6.14%	150,081	-	-	320,086	155,929	79,192	7,532	8,390	1,166	61,173	256,584	44.8%
1985	709,540	6.13%	146,652	-	-	311,086	151,632	82,740	8,123	8,168	1,139	58,940	258,559	45.9%
1986	709,118	6.08%	150,273	-	-	305,736	147,798	87,186	8,122	8,411	1,133	57,355	262,388	47.0%
1987	699,653	6.09%	146,016	-	-	300,949	143,645	91,287	8,702	7,901	1,153	60,316	266,122	48.1%
1988	694,016	6.09%	136,913	-	-	299,786	143,030	96,968	8,608	7,600	1,111	61,798	273,804	49.1%
1989	700,010	6.05%	142,544	-	-	293,179	144,540	102,087	8,863	7,708	1,089	61,472	282,804	50.7%

CONTINUED ON NEXT PAGE

3.1 Active FAA Certificated Pilots (1960–2013) CONTINUED

Year	Pilots		Students ⁷	Rec. ⁵	Sport ⁶	Airplane ¹			Rotorcraft (Only)	Glider (Only) ²	Lighter-Than-Air	Flight Instructor ³	Instrument Ratings ^{3,4}	
	Total	% Women				Private	Commercial	ATP					Total	% of Total
1990	702,659	5.77%	128,663	87	-	299,111	149,666	107,732	9,567	7,833	n/a	63,775	297,073	51.8%
1991	692,095	5.91%	120,203	161	-	293,306	148,385	112,167	9,860	8,033	n/a	69,209	303,193	53.0%
1992	682,959	5.95%	114,597	187	-	288,078	146,385	115,855	9,652	8,205	n/a	72,148	306,169	53.9%
1993	665,069	5.93%	103,583	206	-	283,700	143,014	117,070	9,168	8,328	n/a	75,021	305,517	54.4%
1994	654,088	5.99%	96,254	241	-	284,236	138,728	117,434	8,719	8,476	n/a	76,171	302,300	54.2%
1995	639,184	5.67%	101,279	232	-	261,399	133,980	123,877	7,183	11,234	n/a	77,613	298,798	55.6%
1996	622,261	5.57%	94,947	265	-	254,002	129,187	127,486	6,961	9,413	n/a	78,551	297,895	56.5%
1997	616,342	5.59%	96,101	284	-	247,604	125,300	130,858	6,801	9,394	n/a	78,102	297,409	57.2%
1998	618,298	5.72%	97,736	305	-	247,226	122,053	134,612	6,964	9,402	n/a	79,171	300,183	57.7%
1999	635,472	5.81%	97,359	343	-	258,749	124,261	137,642	7,728	9,390	n/a	79,694	308,951	57.5%
2000	625,581	6.11%	93,064	340	-	251,561	121,858	141,596	7,775	9,387	n/a	80,931	311,944	58.6%
2001	612,274	5.82%	86,731	316	-	243,823	120,502	144,702	7,727	8,473	n/a	82,875	315,276	60.0%
2002	631,762	5.49%	85,991	317	-	245,230	125,920	144,708	7,770	21,826	n/a	86,089	317,389	58.2%
2003	625,011	6.12%	87,296	310	-	241,045	123,990	143,504	7,916	20,950	n/a	87,816	315,413	58.7%
2004	618,633	6.09%	87,910	291	-	235,994	122,592	142,160	8,586	21,100	n/a	89,596	313,545	59.1%
2005	609,737	6.11%	87,213	276	134	228,619	120,614	141,992	9,518	21,369	n/a	90,555	311,828	59.7%
2006	597,109	6.13%	84,866	239	939	219,233	117,610	141,935	10,690	21,597	n/a	91,343	309,333	60.5%
2007	590,349	6.12%	84,339	239	2,031	211,096	115,127	143,953	12,290	21,274	n/a	92,175	309,865	61.5%
2008	613,746	5.83%	80,989	252	2,623	222,596	124,746	146,838	14,647	21,055	n/a	93,202	325,247	61.4%
2009	594,285	6.39%	72,280	234	3,248	211,619	125,738	144,600	15,298	21,268	n/a	94,863	323,495	62.4%
2010	627,588	5.86%	119,119	212	3,682	202,020	123,705	142,198	15,377	21,275	n/a	96,473	318,001	63.0%
2011	617,128	6.39%	118,657	227	4,066	194,441	120,865	142,511	15,220	21,141	n/a	97,409	314,122	63.6%
2012	610,576	6.77%	119,946	218	4,493	188,001	116,400	145,590	15,126	20,802	n/a	98,328	311,952	64.2%
2013	599,086	6.78%	120,285	238	4,824	180,214	108,206	149,824	15,114	20,381	n/a	98,842	307,120	64.8%

- 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. Beginning in 1995, 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.
- 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.
- Not included in total.
- The instrument rating is as shown on pilot certificates but does not indicate an additional certificate. The percent of total does not include student, sport, and recreational pilots.

- Recreational certificate was first issued in 1990.
- Sport pilot certificate was first issued in 2005.
- The Federal Aviation Administration (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 40 years of age, increasing from 36 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 72,280 the prior year.
- 1994 counts based on medical certificates issued 27 or fewer months ago. All other years based on medical certificates issued 25 or fewer months ago.

Source: FAA

DEFINITIONS

Active Pilot — A pilot who holds a pilot certificate and a valid medical certificate (except for sport pilots).

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

Airman Certificate — A document issued by the Administrator of the Federal Aviation Administration. The Airman Certificate certifies 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 an aircraft.

3.2 Active FAA Certificated Pilots and Flight Instructors by State and Region (as of December 31, 2013)

FAA Region and State	Total Pilots	Students	Recreational	Sport	Airplane			Other	Flight Instructor ¹
					Private	Commercial	Airline Transport		
Total²	599,086	120,285	239	4,824	196,848	123,466	153,424	86,376	98,842
United States – Total³	552,656	109,176	239	4,804	187,117	106,236	145,084	81,221	96,348
Non-U.S. Total⁵	46,430	11,109	0	20	9,731	17,230	8,340	5,155	2,494
Alabama	7,491	1,545	3	60	2,470	2,062	1,351	1,850	1,438
Alaska	8,066	1,126	1	52	2,933	1,791	2,163	1,009	1,328
American Samoa	7	0	0	0	0	2	5	0	0
Arizona	18,274	3,845	2	120	5,189	3,719	5,399	3,534	3,694
Arkansas	5,048	1,116	1	66	1,761	1,213	891	474	764
California	59,841	12,033	4	359	23,625	12,047	11,773	10,035	9,452
Colorado	17,435	2,817	2	96	5,264	3,304	5,952	3,231	3,528
Connecticut	5,182	906	1	27	1,985	858	1,405	770	846
Delaware	1,356	334	0	8	401	230	383	190	242
District of Columbia	535	133	0	5	217	84	96	76	84
Federated States of Micronesia	1	0	0	0	0	1	0	1	0
Florida	52,437	12,185	6	434	13,694	9,953	16,165	7,031	9,283
Georgia	18,325	3,008	4	139	5,116	2,813	7,245	2,314	3,184
Guam	197	21	0	0	21	31	124	31	49
Hawaii	3,150	622	0	13	668	735	1,112	770	656
Idaho	4,834	902	1	62	1,885	1,056	928	825	809
Illinois	16,887	3,119	4	233	5,887	2,894	4,750	2,017	3,354
Indiana	9,684	1,724	6	182	3,734	1,807	2,231	1,027	1,655
Iowa	5,279	974	1	83	2,417	1,100	704	623	816
Kansas	6,934	1,281	2	71	2,847	1,437	1,296	831	1,406
Kentucky	5,827	1,028	7	45	1,644	905	2,196	761	1,075
Louisiana	5,696	1,215	2	54	1,907	1,403	1,115	1,098	870
Maine	2,450	399	2	40	969	526	514	314	384
Marshall Islands	3	0	0	0	0	1	2	0	0
Maryland	7,782	1,882	2	80	2,575	1,447	1,796	1,132	1,323
Massachusetts	7,968	1,752	4	52	3,215	1,411	1,534	1,108	1,192
Michigan	14,112	2,480	13	186	5,600	2,642	3,191	1,702	2,445
Minnesota	12,478	1,933	0	92	4,506	2,171	3,776	1,084	2,500
Mississippi	4,126	1,031	2	26	1,265	884	918	491	653
Missouri	9,087	1,732	3	120	3,295	1,733	2,204	1,219	1,610
Montana	3,822	704	3	24	1,520	938	633	659	657
Nebraska	3,498	759	0	29	1,406	735	569	302	492
Nevada	6,811	1,096	1	43	1,988	1,374	2,309	1,444	1,341
New Hampshire	3,691	534	3	37	1,130	631	1,356	590	699
New Jersey	9,004	1,885	6	31	3,185	1,587	2,310	1,450	1,607
New Mexico	4,562	888	2	53	1,773	1,158	688	1,489	628
New York	16,267	4,108	24	111	5,961	3,018	3,045	2,452	2,617
North Carolina	14,055	2,560	4	118	4,817	2,468	4,088	1,834	2,379
North Dakota	3,500	731	0	13	1,184	1,296	276	271	472
Northern Mariana Islands	13	5	0	0	2	2	4	1	3
Ohio	15,586	2,856	53	196	5,709	2,770	4,002	1,981	2,981
Oklahoma	7,889	2,113	2	45	2,795	1,520	1,414	728	1,249
Oregon	8,718	1,607	3	70	3,602	2,040	1,396	1,795	1,610
Palau	1	0	0	0	1	0	0	1	0
Pennsylvania	15,637	3,043	33	157	5,545	2,759	4,100	2,470	2,720
Puerto Rico	1,652	603	1	35	372	295	346	190	228
Rhode Island	979	214	1	7	353	185	219	109	146
South Carolina	6,527	1,180	0	57	2,272	1,242	1,776	889	1,020
South Dakota	2,213	404	0	49	869	522	369	270	404
Tennessee	11,660	1,982	3	90	3,374	2,004	4,207	1,657	2,036
Texas	49,616	9,896	4	319	14,850	8,805	15,742	6,809	8,435
Utah	7,969	1,731	0	58	2,414	1,523	2,243	1,231	1,510
Vermont	1,267	207	3	10	542	255	250	267	177
Virgin Islands	169	40	0	1	55	28	45	17	26
Virginia	14,354	2,790	9	118	4,446	2,862	4,129	2,402	2,609
Washington	18,753	3,393	4	165	6,160	3,437	5,594	2,789	3,392
West Virginia	1,806	411	1	35	723	340	296	246	265
Wisconsin	9,278	1,587	6	208	3,944	1,488	2,045	816	1,577
Wyoming	1,874	364	0	17	811	379	303	272	283
AA – Americas ⁴	24	3	0	0	5	6	10	10	6
AE – Europe and Canada ⁴	410	91	0	1	111	149	58	124	77
AP – Pacific ⁴	559	248	0	2	106	160	43	108	62

Source: FAA

1. Not included in total.

2. Includes non-U.S. total.

3. Includes American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Palau, Puerto Rico, and Virgin Islands.

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

5. Non-U.S. are non-U.S. nationals who hold FAA certificates.

3.3 Active FAA Pilot Certificates Held by Category and Age Group of Holder (as of December 31, 2013)

Age Group	Type of Pilot Certificate							
	Total Pilots	Student	Recreational	Sport Pilot	Private	Commercial	Airline Transport	Flight Instructor
Total	599,086	120,285	239	4,824	196,848	123,466	153,424	98,842
14-15	162	162	0	0	0	0	0	0
16-19	16,253	12,505	5	30	3,397	316	0	50
20-24	55,990	30,180	53	98	14,990	10,372	297	3,122
25-29	63,257	24,404	34	123	14,585	19,248	4,863	8,805
30-34	53,844	15,519	8	162	13,480	13,361	11,314	11,553
35-39	48,020	10,720	6	187	12,949	9,544	14,614	10,195
40-44	53,699	8,982	7	255	15,592	9,504	19,359	11,136
45-49	54,363	4,915	9	468	16,661	8,704	23,606	10,779
50-54	64,158	4,742	18	669	22,808	10,141	25,780	10,078
55-59	64,940	3,529	22	885	26,870	11,111	22,523	9,517
60-64	52,883	2,225	32	807	23,655	10,862	15,302	8,243
65-69	39,917	1,357	17	593	17,460	10,862	9,628	7,506
70-74	18,306	686	16	349	8,287	5,146	3,822	4,358
75-79	8,448	217	5	140	3,876	2,643	1,567	2,185
80 and over	4,846	142	7	58	2,238	1,652	749	1,315

Source: FAA

3.4 Average Age of Active FAA Pilots by Category (1993-2013)

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
2012	44.7	31.5	47.8	54.7	48.3	44.8	49.9
2013	44.8	31.5	44.8	55.2	48.5	45.4	49.7

Source: FAA

3.5 FAA Pilot Certificates Issued by Category (1978–2012)

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	2,006	19,893	14,570	11,350	9,399	3,113	11,605	3,648	1,011	249	10
2010	54,064	1,057	14,977	10,260	8,056	7,778	3,072	10,890	2,686	670	222	8
2011	55,298	857	16,802	10,703	8,559	10,027	4,677	13,694	3,123	894	219	10
2012	54,370	694	16,571	10,720	8,651	9,341	6,396	12,768	2,892	900	180	0

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

Source: FAA



3.6 FAA Non-Pilot Certificates (2000–2013)

Year	Mechanic	Repairman	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer	Flight Attendant ¹
2000	344,434	38,208	10,477	72,326	16,340	570	65,098	n/a
2001	310,850	40,085	7,927	72,261	16,070	509	65,398	n/a
2002	315,928	37,114	8,063	73,658	16,695	431	63,681	n/a
2003	313,032	37,248	7,883	72,692	16,955	382	61,643	n/a
2004	317,111	39,231	8,011	73,735	17,493	336	59,376	n/a
2005	320,293	40,030	8,150	74,378	18,079	298	57,756	125,032
2006	323,097	40,329	8,252	74,849	18,610	264	55,952	134,874
2007	322,852	40,277	8,186	74,544	19,043	250	54,394	147,013
2008	326,276	41,056	8,248	74,983	19,590	222	53,135	154,671
2009	329,027	41,389	8,362	75,461	20,132	181	51,022	156,741
2010	308,367	41,196	8,009	70,560	16,576	171	48,569	156,368
2011	335,431	40,802	8,491	74,586	21,363	146	47,659	167,037
2012	337,775	40,444	8,474	73,599	21,862	141	46,639	172,357
2013	338,844	39,952	8,491	72,493	22,401	126	45,317	179,531

Number of non-pilot certificates represents all certificates on record since no medical examination is required.
 1. Flight attendant information was first available from FAA Registry in 2005.

Source: FAA

PILOT CATEGORIES

Student Pilot — A student pilot must be 16 years old, medically certificated by a Federal Aviation Administration (FAA) medical examiner, and may only fly solo under the supervision of a flight instructor. 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, not more than 50 miles from his or her home airport.

Sport Pilot — A sport pilot may operate a light-sport aircraft under a limited set of flight conditions. The certificate does not require an FAA medical examination, but the pilot 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 carry passengers in any aircraft. The private pilot may not act as pilot-in-command of an aircraft that is carrying passengers for compensation or hire or act as pilot-in-command of an aircraft that is being operated for compensation or hire (such as an aircraft hired to conduct pipeline patrol but carrying no passengers).

Commercial Pilot — A commercial pilot may act as pilot-in-command of an aircraft that is carrying passengers for compensation or hire, and as pilot-in-command of an aircraft that is being operated for compensation or hire, but not as pilot-in-command of an aircraft in air carrier service.

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

Airports and Aeronautical Facilities

4.1 U.S. Civil and Joint Use Airports, Heliports, and Seaplane Bases on Record by Type of Ownership (2010)

State or Territory	State or Territory Total	Public Use		Civil Private Use Landing Facilities							Military-Only Use
		Total	Part 139	Total	Airports	Heliports	Seaplane Bases	Other			
								Gliderports	Balloon Ports	Ultralight Flightparks	
Grand Total	19,750	5,178	559	14,120	8,405	5,425	290	31	13	134	274
United States - Total	19,729	5,168	551	14,111	8,403	5,418	290	31	13	134	272
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	-	-

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4.1 U.S. Civil and Joint Use Airports, Heliports, and Seaplane Bases on Record by Type of Ownership (2010) CONTINUED

State or Territory	State or Territory Total	Public Use		Civil Private Use Landing Facilities							Military-Only Use
		Total	Part 139	Total	Airports	Heliports	Seaplane Bases	Other			
								Gliderports	Balloon Ports	Ultralight Flightparks	
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	-	-	-	-	-

U.S. total does not include U.S. territories.

Source: FAA Airport Engineering Division

4.2 FAA Air Route Facilities and Services (1972–2013)

Year	VOR VORTAC	Non-Directional Beacons	Air Route Traffic Control Centers	Air Route Traffic Control Towers	Flight Service Stations	International Flight Service Stations	Instrument Landing Systems	WAAS-Enabled Procedures	Airport Surveillance Radar	ADS-B Radios (IOC)
1972	991	706	27	355	324	7	403	n/a	125	0
1973	995	739	27	403	315	7	467	n/a	142	0
1974	1,000	793	26	417	320	7	490	n/a	156	0
1975	1,011	848	25	487	321	7	580	n/a	177	0
1976	1,020	920	25	488	321	7	640	n/a	175	0
1977	1,021	959	25	495	319	7	678	n/a	182	0
1978	1,020	988	25	494	319	6	698	n/a	185	0
1979	1,028	1,015	25	499	318	6	753	n/a	192	0
1980	1,037	1,055	25	502	317	6	796	n/a	192	0
1981	1,033	1,123	25	501	316	6	840	n/a	199	0
1982	1,029	1,143	25	492	316	6	884	n/a	197	0
1983	1,032	1,183	25	494	316	5	934	n/a	197	0
1984	1,035	1,211	25	497	310	5	955	n/a	197	0
1985	1,039	1,222	25	500	302	4	968	n/a	198	0
1986	1,043	1,239	25	686	293	3	977	n/a	312	0
1987	1,039	1,212	25	500	302	4	968	n/a	312	0
1988	1,043	1,239	25	686	293	3	977	n/a	311	0
1989	1,046	1,263	25	686	255	3	1,100	n/a	312	0
1990	1,045	1,271	25	686	235	3	1,120	n/a	311	0
1991	1,045	1,295	24	694	192	3	1,114	n/a	318	0
1992	1,044	1,314	24	691	179	3	1,177	n/a	312	0
1993	1,046	1,263	24	686	255	3	1,100	n/a	312	0
1994	1,045	1,271	24	686	235	3	1,120	n/a	311	0
1995	1,045	1,295	24	694	192	3	1,114	n/a	318	0
1996	1,044	1,314	24	691	179	3	1,177	n/a	312	0
1997	1,041	1,344	24	684	135	3	1,231	n/a	310	0
1998	1,039	1,348	24	683	128	3	1,238	n/a	307	0
1999	1,041	1,320	24	680	75	3	1,327	n/a	295	0
2000	993	1,199	25	663	75	3	1,370	n/a	297	0
2001	1,116	1,675	24	678	76	3	1,388	n/a	292	0
2002	n/a	n/a	21	n/a	76	3	n/a	n/a	n/a	0
2003	n/a	n/a	21	n/a	76	3	n/a	n/a	n/a	0
2004	1,119	1,685	21	688	76	3	1,473	n/a	227	0
2005	1,111	1,613	21	693	76	3	1,490	n/a	226	0
2006	n/a	n/a	21	494	76	n/a	n/a	n/a	n/a	0
2007	n/a	n/a	21	499	76	n/a	n/a	n/a	n/a	0
2008	n/a	n/a	21	503	4	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	21	508	4	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	21	508	4	n/a	n/a	n/a	n/a	202
2011	n/a	n/a	21	512	4	n/a	n/a	11,828	n/a	339
2012	n/a	n/a	22	514	4	n/a	n/a	12,876	n/a	440
2013	967	n/a	22	515	4	n/a	n/a	13,956	n/a	556

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

Source: FAA Air Traffic Organization

Air Traffic Control data shows federal, non-federal, and military through 2005, while 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 and 2012 figures are from November.

WAAS-capable approach procedures include LNAV, LNAV/VNAV, LPV, LPV with 200' HAT, LP procedures, and GPS stand-alone procedures, of which 3,364 are LPV in 2013 data.

4.3 U.S. Airports Ranked by Number of General Aviation Operations at Tower (2013)

Rank 2013	Facility	Airport Name and State	General Aviation Operations					Total Airport Operations	Total GA Operations	GA as % of Total	Tower Operations
			IFR GA		VFR GA		Local Civil GA				
			Itinerant	Overflight	Itinerant	Overflight					
1	DVT	Phoenix Deer Valley, AZ	6,290	461	129,482	7,081	214,601	354,995	357,915	98.7%	362,782
2	VNY	Van Nuys, CA	31,495	3,705	122,888	38,801	101,558	268,531	298,447	92.5%	322,747
3	DAB	Daytona Beach, FL	45,617	289	155,982	3,120	83,406	292,826	288,414	97.3%	296,537
4	FFZ	Falcon Field, AZ	4,052	43	102,240	9,213	149,925	263,696	265,473	97.0%	273,579
5	APA	Centennial Airport, CO	37,233	83	97,694	6,327	121,830	292,384	263,167	87.3%	301,524
6	LGB	Long Beach, CA	25,080	500	77,226	17,089	139,216	275,496	259,111	88.3%	293,506
7	SFB	Sanford-Orlando, FL	39,935	34	62,062	1,424	153,662	270,183	257,117	94.6%	271,748
8	PRC	Ernest A. Love Field, AZ	2,210	17	80,408	1,129	172,662	260,024	256,426	98.0%	261,583
9	TMB	Kendall-Tamiami Executive Airport, FL	28,961	289	100,734	4,545	111,691	243,929	246,220	98.9%	249,050
10	GFK	Grand Forks Int'l, ND	7,908	20	9,199	246	215,821	346,074	233,194	67.3%	346,534
11	HIO	Portland-Hillsboro Airport, OR	16,389	516	53,798	3,978	141,387	215,861	216,068	98.0%	220,456
12	CHD	Chandler Municipal Airport, AZ	1,972	7	75,262	6,677	131,231	211,656	215,149	98.1%	219,217
13	FRG	Republic Airport, NY	13,517	184	92,653	4,479	97,788	214,638	208,621	92.2%	226,343
14	SEE	Gillespie Field, CA	12,896	362	67,067	3,592	112,576	193,401	196,493	99.4%	197,656
15	VRB	Vero Beach Municipal Airport, FL	19,373	300	62,125	2,705	109,728	194,610	194,231	98.3%	197,649
16	MYF	Montgomery Field Airport, CA	22,082	179	69,035	10,160	91,915	186,192	193,371	98.0%	197,233
17	PAO	Palo Alto Airport, CA	5,542	2,795	72,977	8,756	97,103	177,397	187,173	97.7%	191,593
18	CNO	Chino, CA	13,884	1,390	48,913	9,138	104,919	169,703	178,244	98.7%	180,546
19	SNA	John Wayne-Orange County, CA	33,777	658	62,448	11,883	67,340	259,749	176,106	64.3%	274,058
20	DWH	David Wayne Hooks Mem. Airport, TX	18,324	119	65,935	5,084	83,978	175,408	173,440	95.2%	182,257
21	IWA	Phoenix-Mesa Gateway Airport, AZ	5,055	183	60,039	6,908	95,544	188,662	167,729	84.8%	197,856
22	DTO	Denton Municipal Airport, TX	12,647	270	56,029	2,822	90,298	160,740	162,066	98.8%	164,039
23	BFI	Boeing Field, King County Airport, WA	26,437	1,137	65,382	19,257	46,998	181,941	159,211	73.9%	215,547
24	LVK	Livermore Municipal Airport, CA	9,431	49	54,205	3,255	92,116	156,828	159,056	99.3%	160,141
25	FXE	Fort Lauderdale Executive Airport, FL	33,638	283	76,282	12,746	33,452	158,400	156,401	90.7%	172,461
26	EVB	New Smyrna Beach Municipal, FL	6,365	489	40,141	2,992	106,229	154,674	156,216	98.7%	158,229
27	RHV	Reid-Hillview, CA	2,527	5,323	50,898	4,622	91,131	145,743	154,501	80.3%	192,324
28	CRQ	McClellan-Palomar Airport, CA	32,556	239	51,990	6,410	59,255	155,286	150,450	90.4%	166,518
29	PMP	Pompano Beach Airpark, FL	5,110	7,056	39,673	14,989	82,677	128,752	149,505	94.5%	158,217
30	HWO	North Perry Airport, FL	2,490	138	47,636	6,802	91,949	142,399	149,015	99.6%	149,664
31	CMA	Camarillo Airport, CA	13,141	4,446	54,013	5,670	66,650	136,510	143,920	95.3%	150,977
32	FPR	Saint Lucie Country Int'l Airport, FL	20,784	313	45,827	2,947	72,944	141,313	142,815	98.7%	144,713
33	BED	Laurence G. Hanscom Field Airport, MA	26,058	268	46,586	5,296	62,225	154,488	140,433	87.3%	160,914
34	PDK	DeKalb-Peachtree Airport, GA	45,559	377	43,531	9,507	40,120	144,754	139,094	87.7%	158,669
35	SDL	Scottsdale Airport, AZ	29,796	456	45,249	11,939	51,567	142,360	139,007	88.5%	157,107
36	PUB	Pueblo Memorial Airport, CO	6,550	53	55,932	529	74,204	147,028	137,268	92.9%	147,768
37	TOA	Torrance [Zamperini Field], CA	8,951	159	54,512	12,403	58,936	123,952	134,961	98.2%	137,473
38	RVS	Richard Lloyd Jones, OK	12,366	75	41,847	1,300	78,447	135,281	134,035	97.4%	137,565
39	BUR	Bob Hope Airport, CA	15,912	6,568	20,414	61,702	29,227	131,122	133,823	66.2%	202,095
40	SGJ	Springfield-Beckley Municipal Airport, OH	8,662	2	49,570	724	73,082	140,417	132,040	93.1%	141,824
41	RNM	Ramona Airport, CA	1,591	68	28,916	10,004	87,313	118,629	127,892	99.3%	128,763
42	OMN	Ormond Beach Municipal Airport, FL	7,198	514	61,927	1,026	56,876	126,059	127,541	99.9%	127,633
43	MLB	Melbourne International Airport, FL	27,124	242	45,671	1,540	51,005	131,111	125,582	93.3%	134,555
44	VGJ	North Las Vegas Airport, NV	9,943	330	44,711	4,543	66,043	131,426	125,570	90.9%	138,141
45	PIE	St. Petersburg-Clearwater Int'l. Airport, FL	17,383	793	34,700	9,234	61,122	141,626	123,232	80.6%	152,961
46	SQL	San Carlos Airport, CA	3,567	262	47,986	13,376	57,053	111,500	122,244	96.5%	126,725
47	MER	Castle Airport, CA	9,198	1,014	37,210	1,281	71,515	119,074	120,218	98.4%	122,113
48	GYR	Phoenix Goodyear Airport, AZ	870	272	49,404	3,248	65,593	120,655	119,387	95.3%	125,215
49	MRI	Merrill Field Airport, AK	2,278	128	49,033	2,524	64,738	128,552	118,701	88.0%	134,822
50	HWD	Hayward Executive Airport, CA	6,132	8,382	41,112	12,899	48,420	100,318	116,945	69.9%	167,367

General aviation operations are defined by the FAA based on the 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)

4.4 Airports by Type (2001–2011)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Civil Public Use Airports	5,294	5,286	5,286	5,288	5,270	5,233	5,221	5,202	5,178	5,175	5,172
Civil Public Use Part 139	635	633	628	599	575	604	565	560	559	551	547
Civil Public Use Non-Part 139	n/a	n/a	n/a	n/a	n/a	n/a	4,556	4,642	4,619	4,624	4,625
Civil Public Use Abandoned	26	16	19	10	14	27	18	16	18	14	20
Newly Established Public Use	n/a	n/a	n/a	n/a	n/a	n/a	9	3	5	16	6
Total Civil Private Use Airports	14,062	14,286	14,295	14,532	14,584	14,757	14,839	14,451	14,298	14,353	14,339
Civil Private Use Airports Abandoned	220	121	214	117	115	133	297	461	360	121	183
Newly Established Private Use	n/a	n/a	n/a	n/a	n/a	n/a	274	151	214	212	20
Military Airports	75	75	73	57	n/a	n/a	261	277	274	274	271
Total Airports by Type	19,356	19,572	19,581	19,820	19,854	19,983	20,341	19,930	19,750	19,802	19,782
Airports	n/a	n/a	n/a	n/a	n/a	n/a	13,822	13,589	13,494	13,473	13,450
Heliports	n/a	n/a	n/a	n/a	n/a	n/a	5,708	5,568	5,571	5,650	5,686
Seaplane Bases	n/a	n/a	n/a	n/a	n/a	n/a	527	503	497	496	497
Gliderports	n/a	n/a	n/a	n/a	n/a	n/a	35	35	35	35	35
Stolports	n/a	n/a	n/a	n/a	n/a	n/a	87	82	n/a	n/a	n/a
Balloon Ports	n/a	n/a	n/a	n/a	n/a	n/a	15	14	14	13	13
Ultralight Flightparks	n/a	n/a	n/a	n/a	n/a	n/a	147	139	139	135	131

The category "stolport" was eliminated in 2009.
The data is as of December 31 for the years listed.

Source: FAA Administrator's Factbook

Certificated airports service air carrier operations with aircraft seating more than 9 passengers [Part 139].

4.5 Airports by Country, Europe, and the United States, 2010–2012 Estimates

Country	Albania	Andorra	Austria	Belgium	Bosnia-Herz.	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Latvia	Liechtenstein
Airports with Paved Runways	4	-	24	27	7	124	24	13	41	28	13	75	297	322	67	20	6	16	99	19	-
Over 10,000 ft	-	-	1	6	-	2	2	-	2	2	2	3	14	14	6	2	1	1	9	1	-
8,000 ft to 10,000 ft	3	-	5	9	4	17	6	6	9	7	8	26	26	48	15	6	-	1	31	3	-
5,000 ft to 8,000 ft	1	-	1	2	1	15	3	3	12	4	2	10	98	60	19	5	3	4	18	5	-
3,000 ft to 5,000 ft	-	-	4	1	-	-	3	3	2	12	1	21	83	70	18	6	2	5	29	3	-
Under 3,000 ft	-	-	13	9	2	90	10	1	16	3	-	15	76	130	9	1	-	5	12	7	-
Airport with Unpaved Runways	1	-	28	18	18	78	45	2	87	61	5	73	176	219	15	21	93	23	31	23	-
Over 10,000 ft	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8,000 ft to 10,000 ft	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5,000 ft to 8,000 ft	-	-	1	-	1	-	1	-	1	-	1	-	2	-	2	3	-	1	-	-	-
3,000 ft to 5,000 ft	1	-	3	-	6	6	6	-	26	2	1	3	67	32	2	8	27	2	11	-	-
Under 3,000 ft	-	-	24	16	11	72	38	2	60	59	3	70	109	185	13	11	63	21	19	23	-
Heliports	1	-	1	1	6	2	1	9	1	-	1	-	1	22	9	3	-	-	5	1	-

Country	Lithuania	Luxembourg	Macedonia	Malta	Monaco	Montenegro	Netherlands	Norway	Poland	Portugal	Romania	Serbia	Slovakia	Slovenia	Spain	Sweden	Switzerland	Turkey	United Kingdom	Europe Total	United States
Airports with Paved Runways	26	1	10	1	-	5	20	67	86	43	26	11	19	7	98	149	41	89	272	2,197	5,194
Over 10,000 ft	3	1	-	1	-	-	2	1	5	5	4	2	2	1	18	3	3	16	7	142	189
8,000 ft to 10,000 ft	1	-	2	-	-	2	10	12	29	7	10	3	2	1	12	12	2	35	31	401	235
5,000 ft to 8,000 ft	7	-	-	-	-	1	2	11	37	8	11	3	3	1	19	74	13	17	93	566	1,479
3,000 ft to 5,000 ft	2	-	-	-	-	1	5	19	9	13	-	3	3	3	25	23	6	17	76	468	2,316
Under 3,000 ft	13	-	8	-	-	1	1	24	6	10	1	-	9	1	24	37	17	4	65	620	975
Airport with Unpaved Runways	55	1	4	-	-	1	7	31	39	22	27	19	18	9	54	81	23	9	190	1,607	9,885
Over 10,000 ft	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
8,000 ft to 10,000 ft	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
5,000 ft to 8,000 ft	-	-	-	-	-	-	-	-	1	-	-	1	-	1	2	-	-	1	2	21	155
3,000 ft to 5,000 ft	2	-	1	-	-	1	3	6	17	1	6	10	10	3	14	5	-	4	25	311	1,752
Under 3,000 ft	52	1	3	-	-	-	4	25	21	21	21	8	8	5	38	76	23	4	163	1,272	7,971
Heliports	-	1	-	2	1	1	1	1	6	-	4	2	1	-	10	2	1	20	9	126	126

Source: CIA World Factbook

Safety and Accident Statistics

5.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1938–2013)

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

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5.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1938–2013) CONTINUED

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1970	4,712	n/a	641	n/a	n/a	n/a	26,033,000	18.10	2.46
1971	4,648	n/a	661	n/a	n/a	n/a	25,538,000	18.20	2.59
1972	4,256	n/a	695	n/a	n/a	n/a	26,937,000	15.80	2.67
1973	4,255	n/a	723	n/a	n/a	n/a	29,965,000	14.20	2.52
1974	4,234	n/a	689	n/a	n/a	n/a	27,855,000	15.20	2.47
1975	4,001	n/a	636	n/a	n/a	n/a	28,784,000	13.90	2.20
1976	4,023	n/a	662	n/a	n/a	n/a	30,477,000	13.20	2.16
1977	4,083	n/a	663	n/a	n/a	n/a	31,651,000	12.90	2.09
1978	4,218	n/a	721	n/a	n/a	n/a	34,860,000	12.10	2.06
1979	3,625	n/a	636	n/a	n/a	n/a	36,690,000	9.88	1.63
1980	3,597	n/a	622	n/a	n/a	n/a	36,481,000	9.86	1.69
1981	3,502	n/a	654	n/a	n/a	n/a	36,824,000	9.51	1.78
1982	3,233	n/a	591	n/a	1,187	1,170	29,640,000	10.91	1.99
1983	3,075	15	555	5	1,068	1,061	28,673,000	10.67	1.92
1984	3,017	26	545	11	1,042	1,021	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	2,056	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	1,716	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	1,619	3	314	0	559	559	24,888,000	6.49	1.26
2005	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
2007	1,654	2	288	2	496	491	23,819,000	6.94	1.20
2008	1,569	2	277	0	496	487	22,805,000	6.87	1.21
2009	1,480	3	275	0	479	470	20,862,000	7.08	1.32
2010	1,440	2	270	1	457	454	21,688,000	6.63	1.24
2011	1,470	1	266	0	448	437	21,488,000	6.84	1.24
2012	1,471	1	271	1	432	432	21,697,000	6.78	1.24
2013P	1,203	n/a	216	n/a	373	n/a	n/a	n/a	n/a

P = Preliminary
 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.
 Suicide/sabotage and stolen/unauthorized events are excluded from the "Accidents" and "Fatalities" figures.

Source: NTSB, FAA, and GAMA

5.2 U.S. On-Demand FAR Part 135 Accidents, Fatal Accidents, and Fatalities (1987–2013)

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1987	96	0	30	0	65	63	2,657,000	3.61	1.13
1988	102	0	28	0	59	55	2,632,000	3.88	1.06
1989	110	0	25	0	83	81	3,020,000	3.64	0.83
1990	107	0	29	0	51	49	2,249,000	4.76	1.29
1991	88	0	28	0	78	74	2,241,000	3.93	1.25
1992	76	0	24	0	68	65	2,844,000	2.67	0.84
1993	69	0	19	0	42	42	2,324,000	2.97	0.82
1994	85	0	26	0	63	62	2,465,000	3.45	1.05
1995	75	0	24	0	52	52	2,486,000	3.02	0.97
1996	90	0	29	0	63	63	3,220,000	2.80	0.90
1997	82	0	15	0	39	39	3,098,000	2.65	0.48
1998	77	0	17	0	45	41	3,802,000	2.03	0.45
1999	74	0	12	0	38	38	3,204,000	2.31	0.37
2000	80	0	22	0	71	68	3,930,000	2.04	0.56
2001	72	0	18	0	60	59	2,997,000	2.40	0.60
2002	60	0	18	0	35	35	2,911,000	2.06	0.62
2003	73	0	18	0	42	40	2,927,000	2.49	0.61
2004	66	0	23	0	64	63	3,238,000	2.04	0.71
2005	65	0	11	0	18	16	3,815,000	1.70	0.29
2006	52	0	10	0	16	16	3,742,000	1.39	0.27
2007	61	0	14	0	43	43	4,033,000	1.51	0.35
2008	58	0	20	0	69	69	3,408,000	1.70	0.59
2009	47	0	2	0	17	14	3,064,000	1.53	0.07
2010	30	0	6	0	17	17	3,470,000	0.86	0.17
2011	50	0	16	0	41	41	3,082,000	1.62	0.52
2012	37	0	9	0	15	15	2,902,000	1.27	0.31

P = Preliminary

Suicide/sabotage and stolen/authorized events are excluded from the "Accidents" and "Fatalities" figures.

In 2002, FAA changed its 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.

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



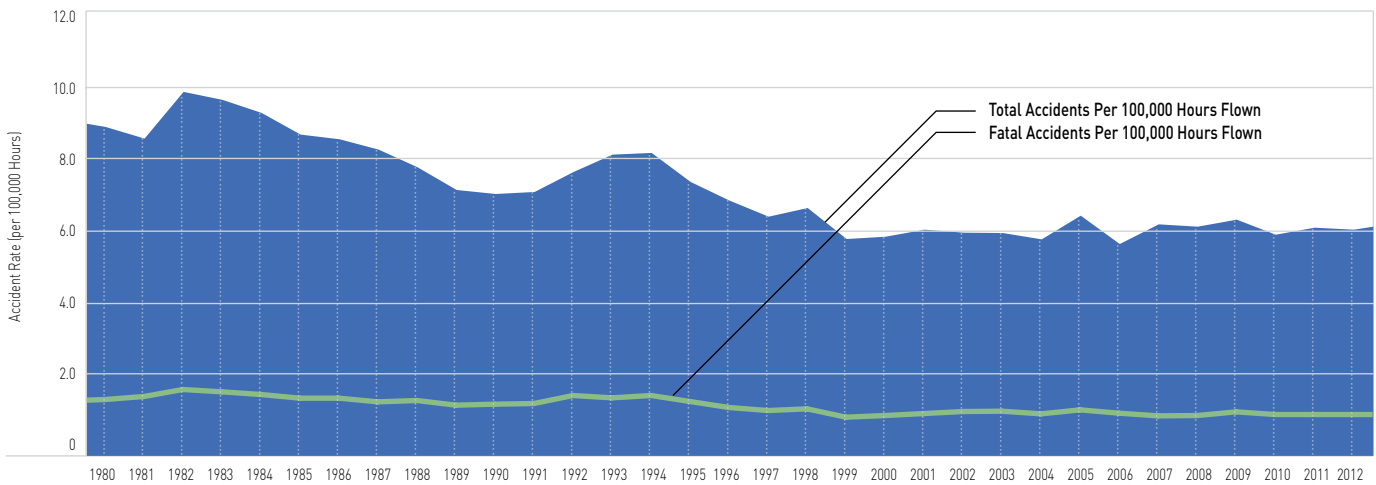
5.3 European Union General Aviation and Aerial Work Accident Data (2006–2012)

Year	Aircraft with Mass Below 2,250 Kg				Aircraft with Mass Above 2,250 Kg				All Aircraft Accidents	
	Accidents		Fatalities		Accidents		Fatalities		Accidents	
	Total	Fatal	Aboard	Ground	Total	Fatal	Aboard	Ground	Total	Fatal
2006	1,121	151	231	3	36	10	29	-	1,157	161
2007	1,157	142	238	5	30	10	18	1	1,187	152
2008	1,145	140	216	2	32	10	23	1	1,177	150
2009	1,234	163	253	4	19	9	18	-	1,253	172
2010	1,047	129	189	1	31	6	14	-	1,078	135
2011	1,109	169	253	1	34	12	29	-	1,143	181
2012	918	133	226	1	11	2	7	-	990	146

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. This data does not include general aviation airplanes conducting Commercial Air Transport operations. Data from 2006–2008 does not include Italy, Liechtenstein, Luxembourg, and Slovenia. The 2012 data includes aerial work accidents in the "All Aircraft" total data only and not part of the other columns.

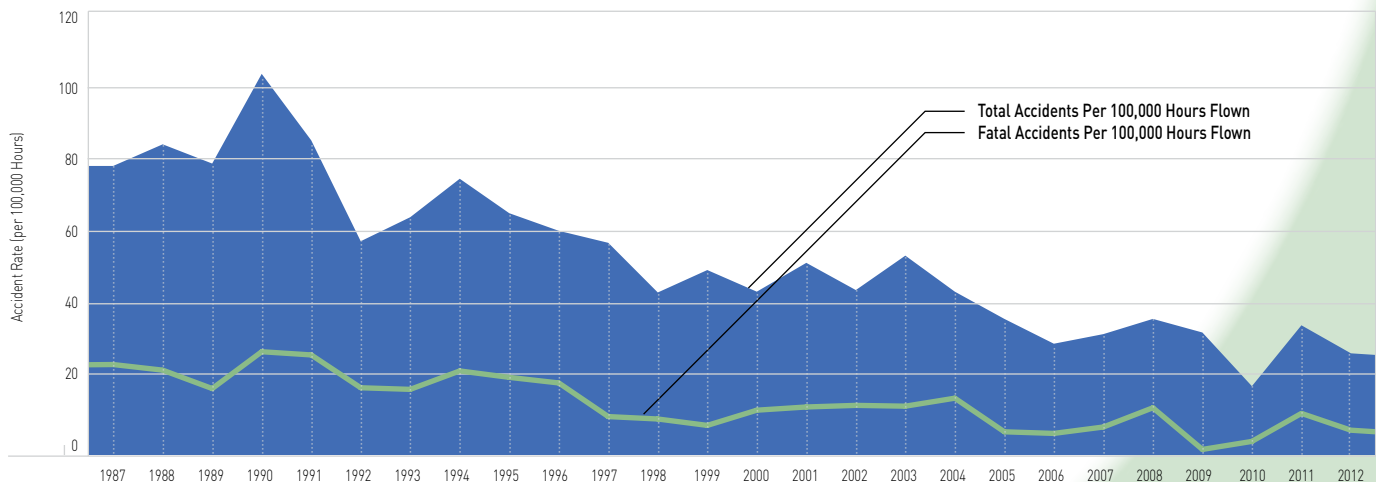
Source: EASA Annual Safety Review

FIGURE 5.1 Accident Rates in U.S. General Aviation (1980–2012)



Source: NTSB, FAA, and GAMA

FIGURE 5.2 Accident Rates in U.S. On-Demand FAR Part 135 Operations (1987–2012)



Source: NTSB

Select GA Aircraft Registry and Other Data

6.1 Australia—Number of General Aviation and Regional Aircraft by Category (1995–2010)

Year	Aircraft Type					Total
	Amateur-Built	Fixed-Wing		Rotorcraft	Balloons & Airships	
		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: Statistical Report, General Aviation Activity, Dept. of Transportation and Regional Services, Bureau of Transport and Regional Economics, www.bitre.gov.au

6.2 Austria—Number of General Aviation Aircraft by Type (2011–2013)

Year	Aircraft Type								Total Aircraft
	Airplanes				Helicopters				
	Below 1,999 kg	2,000–5,699 kg	Above 5,700kg	Motor Gliders	Single-Engine	Multi-Engine	Gyroplanes	Federal Aircraft	
2011	723	110	323	186	99	57	5	17	1,520
2012	706	102	331	184	95	51	5	17	1,491
2013	712	97	326	181	96	52	8	17	1,489

Source: Austrocontrol, www.austrocontrol.at (österreichisches Luftfahrzeugregister)

6.3 Brazil—Number of Aircraft Registrations by Type (1996–2013)

Year	Aircraft Type									Total Aircraft
	Airplanes				Other Aircraft					
	Piston-Engine	Agricultural	Turboprop	Jet Turbine	Helicopters	Sailplanes	Balloons	Dirigibles	Experimental	
1996	7,987	n/a	1,013	462	547	302	4	n/a	n/a	10,315
1997	8,055	n/a	1,111	488	649	304	4	n/a	n/a	10,611
1998	8,172	n/a	1,182	513	749	306	4	1	n/a	10,927
1999	8,273	684	1,192	497	791	307	4	1	3,152	14,217
2000	8,333	724	1,218	500	841	308	4	1	3,348	14,553
2001	8,412	767	1,260	542	897	309	3	1	3,513	14,937
2002	8,445	810	1,303	579	940	310	3	1	3,684	15,265
2003	8,496	862	1,323	560	955	316	3	1	3,882	15,536
2004	8,604	900	1,348	559	981	316	3	1	4,069	15,881
2005	8,718	955	1,361	596	989	316	3	1	4,286	16,270
2006	8,798	978	1,399	603	1,011	309	3	1	3,001	15,125
2007	8,909	1,005	1,488	647	1,097	303	3	1	3,225	15,673
2008	9,164	1,049	1,617	773	1,194	299	3	1	3,525	16,576
2009	9,354	1,044	1,700	820	1,325	3,000	3	1	3,764	19,765
2010	n/a	1,581	n/a	n/a	1,524	n/a	n/a	n/a	4,051	17,335
2011	n/a	1,695	n/a	n/a	1,717	n/a	n/a	n/a	4,474	18,710
2012	n/a	1,800	n/a	n/a	1,909	n/a	n/a	n/a	4,750	19,769
2013	n/a	1,870	n/a	n/a	2,038	n/a	n/a	n/a	4,906	20,429

The experimental category includes ultralights, balloons, gyrocopters, sailplanes, motorpowered sailplanes, dirigibles, and experimental airplanes.

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

ANAC began identification of agricultural aircraft in 2012. The data set for agricultural aircraft captures aircraft also identified in other columns.

6.4 Canada—Number of Aircraft Registrations by Type and Weight Group (1983–2013)

Year	Number of Registered Aircraft by Type								By Weight Group		Total Aircraft
	Aeroplanes	Ultralights	Helicopters	Gliders	Balloons	Gyroplanes	Airships	Ornithopters	≤ 12,500 lbs	12,500 > lbs	
1983	22,354	1,282	1,410	560	177	116	n/a	n/a	n/a	n/a	25,899
1984	22,330	1,971	1,326	572	197	118	n/a	n/a	n/a	n/a	26,514
1985	22,231	2,376	1,276	582	219	117	n/a	n/a	n/a	n/a	26,801
1986	22,105	2,706	1,264	589	247	116	n/a	n/a	n/a	n/a	27,027
1987	22,270	2,946	1,299	602	279	121	n/a	n/a	n/a	n/a	27,517
1988	22,469	3,105	1,338	613	308	122	n/a	n/a	n/a	n/a	27,955
1989	22,463	3,212	1,366	614	339	127	n/a	n/a	n/a	n/a	28,121
1990	22,278	3,363	1,416	609	361	128	n/a	n/a	27,173	982	28,155
1991	21,973	3,477	1,433	601	384	135	n/a	n/a	23,553	981	28,003
1992	21,795	3,607	1,502	602	405	155	n/a	n/a	27,070	996	28,066
1993	21,452	3,744	1,533	597	424	162	n/a	n/a	26,977	935	27,912
1994	21,212	3,840	1,582	601	444	169	n/a	n/a	26,885	963	27,848
1995	21,169	3,956	1,605	601	440	166	n/a	n/a	26,914	1,023	27,937
1996	21,089	4,070	1,643	592	440	168	n/a	n/a	26,919	1,084	28,002
1997	20,985	4,208	1,655	587	450	169	n/a	n/a	26,862	1,192	28,054
1998	20,830	4,305	1,676	592	440	174	n/a	n/a	26,809	1,208	28,017
1999	20,768	4,346	1,711	596	442	181	2	1	26,783	1,264	28,047
2000	25,256	4,467	1,753	600	444	186	2	1	26,922	1,320	28,242
2001	25,435	4,584	1,798	613	453	190	3	1	27,171	1,322	28,493
2002	25,650	4,746	1,831	617	453	189	3	1	27,374	1,370	28,744
2003	25,902	4,922	1,894	674	450	188	3	1	27,752	1,360	29,112
2004	26,335	5,123	1,940	686	459	189	4	1	28,166	1,448	29,614
2005	26,870	5,339	2,019	683	475	192	4	1	28,745	1,499	30,244
2006	27,512	5,568	2,145	687	478	191	4	1	29,422	1,596	31,018
2007	28,195	5,745	2,317	695	481	192	5	1	30,223	1,663	31,886
2008	29,043	5,985	2,504	703	486	191	5	1	31,154	1,779	32,933
2009	29,567	6,184	2,576	715	479	190	5	1	31,709	1,824	33,533
2010	30,118	6,396	2,658	713	486	194	5	1	32,330	1,845	34,175
2011	30,805	6,585	2,728	720	490	198	5	1	32,986	1,961	34,947
2012	31,341	6,803	2,776	722	500	195	5	1	33,563	1,977	35,540
2013	31,780	6,973	2,849	726	511	206	5	1	34,050	2,028	36,078

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

6.5 China—Number of General Aviation Aircraft (2012–2013)

Year	Airplanes				Helicopters	Balloons	Airships	Other	Total Aircraft
	Piston-Engine		Turbine						
	Single	Twin	Turboprop	Turbojet					
2012	705	102	129	2,134	298	21	6	27	3,422
2013	794	96	151	2,371	385	24	6	30	3,857

The turbojet category includes air carrier data, but separate analysis indicates 202 registered business jets in 2013.

Source: GAMA Analysis of CAAC-Provided Model Data

6.6 France—Number of General Aviation Aircraft by Type (1990–2011)

Year	Activity at Aeroclubs														Total Aircraft
	Airplanes			Gliders			Helicopters			Hand Gliders		Ultralights			
	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	n/a	836,248	50,665	n/a	332,217	12,415	n/a	n/a	296	n/a	23,405	n/a	n/a	5,238	n/a
1995	n/a	699,892	47,397	n/a	322,874	11,389	47	6,015	324	n/a	26,162	n/a	n/a	5,360	n/a
2000	n/a	693,681	46,501	n/a	270,834	10,430	31	3,501	302	n/a	23,009	n/a	n/a	7,501	n/a
2004	2,096	643,845	44,937	1,808	267,902	10,837	24	5,672	432	n/a	18,553	n/a	191,061	9,842	n/a
2005	2,109	645,138	44,045	1,989	260,578	10,374	30	n/a	403	18,200	17,985	6,866	304,374	10,532	29,164
2006	2,103	619,323	43,266	1,956	240,739	10,311	30	3,119	403	18,500	18,296	6,993	371,838	11,262	29,552
2007	2,054	597,238	42,730	2,050	226,995	10,219	28	2,640	316	18,700	18,147	8,049	376,710	12,496	30,853
2008	2,057	568,704	41,266	1,853	228,000	9,951	34	4,120	249	18,900	18,354	8,214	378,032	13,108	31,024
2009	2,029	582,054	40,187	1,958	255,576	9,633	n/a	n/a	223	19,200	19,371	8,534	386,084	13,398	31,721
2010	1,980	558,730	40,113	2,353	247,381	9,668	17	3,320	193	19,700	19,949	8,713	376,477	13,534	32,746
2011	1,862	583,074	40,898	1,972	231,628	9,638	18	4,915	198	20,100	20,674	8,476	402,712	14,194	32,410

Active pilots include student pilots.

Gliders include motor gliders, towed gliders, and gliders launched by winch.

Source: French DGAC, Observatoire de l'Aviation civile, www.developpement-durable.gouv.fr

6.7 Germany—Number of General Aviation Aircraft by Type (2001–2013)

Year	Aircraft Type												Total Aircraft
	Airplanes						Helicopters	Motor Gliders	Airships	Balloons	Gliders		
	Single-Engine		Multi-Engine		5,701–14,000 kg	14,001–20,000 kg						Above 20,000 kg	
	Below 2,000 kg	2,000–5,700 kg	Below 2,000 kg	2,000–5,700 kg									
2001	6,813	95	207	476	191	60	612	721	2,434	5	1,474	7,771	20,859
2002	6,731	92	208	467	184	55	619	731	2,494	5	1,400	7,728	20,714
2003	6,658	97	205	452	179	54	653	725	2,533	6	1,362	7,686	20,610
2004	6,670	94	199	440	172	55	619	720	2,584	4	1,351	7,703	20,611
2005	6,682	93	212	417	176	54	651	721	2,664	4	1,305	7,728	20,707
2006	6,704	102	224	417	181	56	663	729	2,766	4	1,278	7,741	20,865
2007	6,705	120	230	417	200	51	702	731	2,824	4	1,264	7,769	21,017
2008	6,738	126	232	436	224	45	734	739	2,948	4	1,286	7,815	21,327
2009	6,752	144	241	445	231	43	757	780	3,022	3	1,261	7,891	21,570
2010	6,801	153	242	444	228	40	772	811	3,081	4	1,260	7,867	21,703
2011	6,744	155	243	428	236	38	770	773	3,122	3	1,257	7,834	21,603
2012	6,757	150	239	414	217	30	767	774	3,185	5	1,215	7,793	21,546
2013	6,733	155	240	403	199	34	758	769	3,263	3	1,201	7,704	21,462

Source: German Civil Aviation Authority (Luftfahrt-Bundesamtes /Statistiken), www.lba.de

6.8 New Zealand—Number of General Aviation Aircraft by Type and Airman Certificates (1933–2013)

Year	Aircraft Type						Total Aircraft
	Airplanes by Mass				Sport	Helicopters	
	Below 2,721 kg	2,721–5,670 kg	5,670–13,608 kg	13,608 kg & Above			
1933	n/a	n/a	n/a	n/a	n/a	n/a	65
1947	n/a	n/a	n/a	n/a	n/a	n/a	154
1959	n/a	n/a	n/a	n/a	n/a	n/a	647
1974	n/a	n/a	n/a	n/a	n/a	n/a	1,430
1992	1,334	77	46	56	1,092	338	2,976
1993	1,410	77	49	61	1,121	356	3,076
1994	1,482	92	59	65	1,136	392	3,226
1995	1,522	101	61	69	1,150	426	3,329
1996	1,548	111	67	67	1,178	449	3,420
1997	1,559	113	68	67	1,163	435	3,405
1998	1,559	113	68	67	1,163	435	3,405
1999	1,539	104	67	73	1,124	420	3,327
2000	1,522	109	69	75	1,127	411	3,313
2001	1,506	107	67	77	1,129	420	3,306
2002	1,492	105	82	77	1,172	450	3,378
2003	1,505	117	74	83	1,245	506	3,530
2004	1,548	132	68	95	1,358	594	3,795
2005	1,564	143	65	103	1,419	643	3,937
	Agricultural	Small	Medium	Large	Sport	Helicopters	
2006	127	1,420	78	117	1,638	653	4,033
2007	124	1,449	82	116	1,723	698	4,192
2008	120	1,492	81	121	1,793	747	4,354
2009	110	1,510	84	118	1,833	760	4,415
2010	110	1,515	84	119	1,853	761	4,442
	Aeroplane	Microlight 1 & 2	Amateur-Built¹	Gliders²	Other³	Helicopters	
2012	1,985	1,029	316	417	311	793	4,851
2013	1,976	1,026	291	443	307	831	4,874

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

The data does not differentiate if aeroplane is used for GA or commercial operations. In 2006, the CAA stopped publishing the number of registered aircraft by weight in favor of classes. In 2012, the CAA began publishing aircraft registry statistics by aircraft class.

1. Amateur-built aircraft includes aeroplanes, gliders, and helicopters.
2. Gliders includes gliders, paragliders, power gliders, amateur-built gliders, and hang gliders.
3. Other includes parachutes, gyroplanes, and balloons.

6.9 South Africa—Number of General Aviation Aircraft by Type (1999–2013)

Year	Aircraft Type													Total Aircraft	
	Aeroplanes											Helicopters			Sport, Rec., Gliders, & Other
	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
2012	2,851	707	10	153	113	349	8	54	377	18	87	671	502	5,846	11,746
2013	2,898	711	12	154	115	341	7	55	381	18	88	680	522	5,964	11,946

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

Source: South African Civil Aviation Authority, www.caa.co.za, and Registry, www.avdex.co.za

6.10 Switzerland—Number of General Aviation Aircraft by Type and Airman Certificates (1990–2012)

Year	Aircraft Type										Total Aircraft	Airman Certificates					Total Airman Certificates
	Below 2,250 kg	2,250–5,700 kg	Above 5,700 kg	Total Airplanes	Helicopters	Motor Gliders	Gliders	Free Balloons	Airships	Private Pilots		Commercial Pilots	ATP	Helicopter Pilots	Other Airman Certificates		
1990	n/a	n/a	n/a	1,952	199	131	1,035	335	1	3,653	8,179	n/a	886	n/a	4,610	n/a	
1991	n/a	n/a	n/a	1,992	218	148	1,035	388	4	3,785	n/a	n/a	n/a	n/a	n/a	n/a	
1992	n/a	n/a	n/a	2,026	233	173	1,045	433	4	3,914	n/a	n/a	n/a	n/a	n/a	n/a	
1993	n/a	n/a	n/a	2,041	240	192	1,061	467	4	4,005	n/a	n/a	n/a	n/a	n/a	n/a	
1994	n/a	n/a	n/a	2,043	246	196	1,058	492	4	4,039	n/a	n/a	n/a	n/a	n/a	n/a	
1995	n/a	n/a	n/a	2,069	238	199	1,072	524	5	4,107	n/a	n/a	n/a	n/a	n/a	n/a	
1996	n/a	n/a	n/a	2,058	234	202	1,080	516	6	4,096	n/a	n/a	n/a	n/a	n/a	n/a	
1997	1,549	271	193	2,013	238	209	1,076	516	6	4,058	n/a	n/a	n/a	n/a	n/a	n/a	
1998	1,581	197	227	2,005	244	228	1,046	510	6	4,039	n/a	n/a	n/a	n/a	n/a	n/a	
1999	1,579	167	265	2,011	246	232	1,033	493	6	4,021	n/a	n/a	n/a	n/a	n/a	n/a	
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	
2011	1,419	214	299	1,932	334	254	800	379	10	3,709	5,565	947	2,201	1,208	2,767	12,688	
2012	1,461	167	294	1,922	326	255	767	377	10	3,657	5,604	1,136	2,362	1,003	2,564	12,669	

Other Airman Certificates includes glider pilots, balloon pilots, validations, flight engineers, multi-crew pilots, and radio navigators.

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

6.11 United Kingdom—Number of General Aviation Aircraft by Type (1989–2013)

Year	Number of Registered Aircraft by Type															Total	
	Fixed-Wing Aeroplanes									Microlights	Helicopters	Gliders	Hang Gliders	Balloons & Min. Lift	Airships		Gyroplanes
	Amphibian	Below 750 kg	751–5,700 kg	5,701–15,000 kg	15,001–50,000 kg	Over 50,000 kg	SLMG	Seaplane									
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	
2012	21	3,245	5,564	219	293	755	296	2	4,045	1,260	2,248	9	1,639	21	322	19,939	
2013	21	3,269	5,505	212	289	761	302	2	4,029	1,232	2,247	9	1,625	20	327	19,850	

SLMG = Self-Launching Motor Glider

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).

The UK CAA restated statistics for 5,701–15,000 kg and 15,001–50,000 kg in January 2013. This re-statement does not change the total number of aircraft.

The fixed-wing aeroplane data does not include one (1) aeroplane in the 751–5,700 kg weight group, because it is listed as unmanned for 2013.

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

6.12 Total Number of Registered General Aviation Aircraft by Select Countries with Active General Aviation Industries (1989–2013)

Year	Australia	Austria	Brazil	Canada	China	France	Germany	New Zealand	South Africa	Switzerland	United Kingdom	United States
1989	n/a	n/a	n/a	28,121	n/a	n/a	n/a	n/a	n/a	n/a	13,958	219,738
1990	n/a	n/a	n/a	28,155	n/a	n/a	n/a	n/a	n/a	3,653	14,350	212,230
1991	n/a	n/a	n/a	28,003	n/a	n/a	n/a	n/a	n/a	3,785	14,710	196,874
1992	n/a	n/a	n/a	28,066	n/a	n/a	n/a	2,976	n/a	3,914	15,017	185,650
1993	n/a	n/a	n/a	27,912	n/a	n/a	n/a	3,076	n/a	4,005	14,941	177,120
1994	n/a	n/a	n/a	27,848	n/a	n/a	n/a	3,226	n/a	4,039	15,015	172,935
1995	9,548	n/a	n/a	27,937	n/a	n/a	n/a	3,329	n/a	4,107	15,059	188,089
1996	9,665	n/a	10,315	28,002	n/a	n/a	n/a	3,420	n/a	4,096	15,303	191,129
1997	9,849	n/a	10,611	28,054	n/a	n/a	n/a	3,405	n/a	4,058	15,594	192,414
1998	10,006	n/a	10,927	28,017	n/a	n/a	n/a	3,405	n/a	4,039	16,013	204,710
1999	10,168	n/a	14,217	28,047	n/a	n/a	n/a	3,327	7,222	4,021	16,293	219,464
2000	10,125	n/a	14,553	28,242	n/a	n/a	n/a	3,313	7,484	4,048	16,473	217,534
2001	10,402	n/a	14,937	28,493	n/a	n/a	20,859	3,306	7,717	4,067	16,474	211,446
2002	10,455	n/a	15,265	28,744	n/a	n/a	20,714	3,378	7,927	4,030	16,663	211,244
2003	10,671	n/a	15,536	29,112	n/a	n/a	20,610	3,530	8,403	3,972	17,013	209,708
2004	10,904	n/a	15,881	29,614	n/a	n/a	20,611	3,795	8,822	3,893	17,588	219,426
2005	11,180	n/a	16,270	30,244	n/a	29,164	20,707	3,937	9,063	3,841	17,894	224,352
2006	11,117	n/a	15,125	31,018	n/a	29,552	20,865	4,033	10,189	3,822	18,445	221,942
2007	11,541	n/a	15,673	31,886	n/a	30,853	21,017	4,192	n/a	3,813	19,890	231,607
2008	12,045	n/a	16,576	32,933	n/a	31,024	21,327	4,354	10,693	3,765	21,331	228,663
2009	12,229	n/a	19,765	33,533	n/a	31,721	21,570	4,415	10,950	3,685	21,063	223,877
2010	12,564	n/a	17,335	34,175	n/a	32,746	21,703	4,442	11,203	3,705	20,379	223,370
2011	n/a	1,520	18,710	34,947	n/a	32,410	21,603	n/a	11,483	3,709	20,040	n/a
2012	n/a	1,491	19,769	35,540	3,422	n/a	21,546	4,851	11,746	3,657	19,939	209,034
2013	n/a	1,489	20,429	36,078	3,857	n/a	21,462	4,874	11,946	n/a	19,850	n/a

Source: See Tables 6.1 through 6.11.

6.13 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
Total – ICAO States	294,020	283,090	283,800	289,720	287,290	296,300	292,000	285,030	261,190	258,720	268,000	269,000	273,500

Excludes the Russian Federation.

Source: ICAO

6.14 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
Total – ICAO States	47,320	45,680	45,240	45,590	46,200	46,720	46,480	40,700	40,100	38,950	40,870	40,730	41,990

Excludes the Russian Federation.

Source: ICAO

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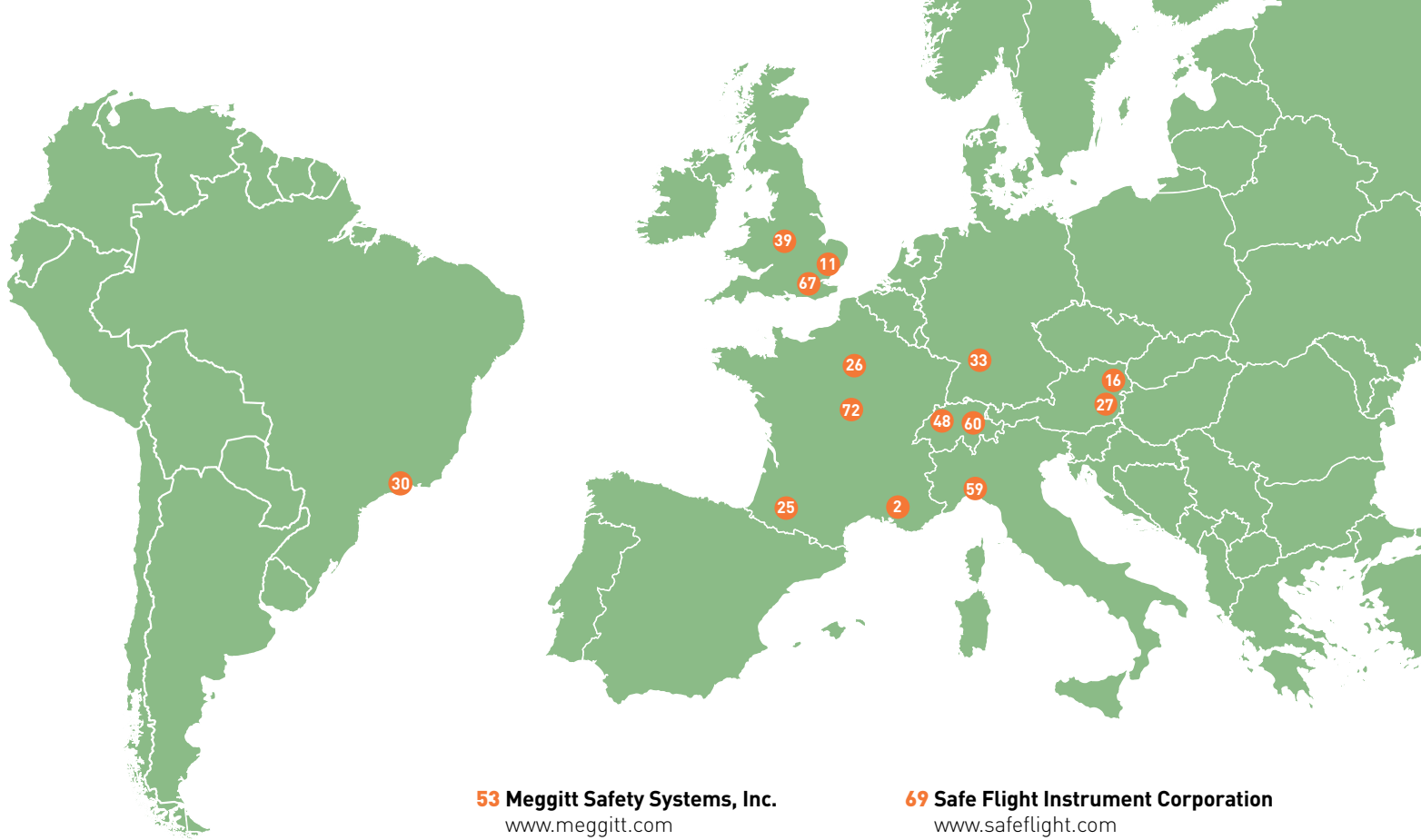
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- 32 Extant Components Group**
www.extantcomponents.com
- 33 Flight Design GmbH**
www.flightdesign.com
- 34 FlightSafety International, Inc.**
www.flightsafety.com
- 35 ForeFlight, LLC**
www.foreflight.com
- 36 Garmin International, Inc.**
www.garmin.com
- 37 GE Aviation**
www.geaviation.com
- 38 General Aviation Modifications, Inc.**
www.gami.com
- 39 GKN Aerospace Transparency Systems, Inc.**
www.gkn.com/aerospace



40 Greenwich AeroGroup

www.greenwichaerogroup.com

41 Gulfstream Aerospace Corporation

www.gulfstream.com

42 Hartzell Propeller, Inc.

www.hartzellprop.com

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www.honeywell.com

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www.ice-ks.com

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www.innovative-ss.com

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www.icg.aero

47 Jeppesen

www.jeppesen.com

48 Jet Aviation

www.jetaviation.com

49 Jet Support Services, Inc.

www.jetsupport.com

50 Kaman Corporation

www.kaman.com

**51 L-3 Communications—
Products Group**

www.L-3com.com

52 Lycoming Engines

www.lycoming.com

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www.meggitt.com

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81 UTC Aerospace Systems

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