

2017 Product Support Survey

Part 1: Aircraft



Dassault Aviation

Embraer and Mitsubishi retain their top positions

report by Matt Thurber; data compiled by David Leach

In the 2017 AIN Product Support Survey, readers of this magazine again rated Embraer tops in the combined overall average ratings of newer and older business aircraft, with the same 8.4 rating the company received last year. Gulfstream, which for many years held the top rating, saw a 0.1 improvement in its rating for large-cabin jets over last year, to 8.3 and second place.

In a move up for Bombardier, the company's Globals climbed 0.2 to achieve an 8.1 rating, tied for third place with Dassault and up from the Globals' fourth place last year. Last year Dassault

tied for second place with Gulfstream's large-cabin and midsize jets.

Gulfstream's midsize jets also saw an improvement this year, up 0.1 to 8.0, although down from last year's second place to fourth place.

Bombardier's Challenger series netted fifth place with a 7.9 rating, down from last year's 8.1 and third place. The company's Learjet series ranked in seventh place with a 7.7 rating, down from last year's 7.8, and just behind Textron Aviation's Citations at sixth place and with a 0.1 drop to 7.8.

Textron Aviation's Premier/Beechjet/Hawker 400 series saw an improvement this year, up 0.1 to 7.5, followed by the company's Hawker jets, which received the same 6.9 rating as last year.

The turboprops arena this year saw a slight drop for perennial favorite and first-placer Mitsubishi and its out-of-production MU-2 series, to 9.2 from 9.3. Both Pilatus Aircraft's PC-12s and Textron Aviation's King Airs climbed in the rankings this year, with a strong jump for the

PC-12 series to 8.2 (the same second place as last year) from 7.6, and a 0.1 climb for the King Airs.

The rotorcraft OEMs didn't change their order this year, but three had changes in ratings, with the most significant Leonardo's climb to 7.0 this year from 6.3 last year, the highest jump for any OEM. Leonardo remains in third place, but hot on the heels of second-place Airbus Helicopters' 7.1 (down 0.1) and first-placer Bell Helicopter at 7.2 (down 0.3).

Combined Overall Average Ratings of Newer and Older Aircraft

	Overall Average 2017	Overall Average 2016	Rating Change from 2016-2017
Jets			
Embraer (Phenom, Legacy, Lineage)	8.4	8.4	0.0
Gulfstream (GII-GV, G300-G650)	8.3	8.2	0.1
Bombardier (Global)	8.1	7.9	0.2
Dassault (Falcon)	8.1	8.2	-0.1
Gulfstream (G100-G280)	8.0	8.2	-0.2
Bombardier (Challenger)	7.9	8.1	-0.2
Textron Aviation (Cessna Citation)	7.8	7.9	-0.1
Bombardier (Learjet)	7.7	7.8	-0.1
Textron Aviation (Premier, Beechjet 400/400A, Hawker 400XP)	7.5	7.4	0.1
Textron Aviation (Hawker)	6.9	6.9	0.0
Turboprops			
Mitsubishi (MU-2, Solitaire, Marquise)	9.2	9.3	-0.1
Pilatus (PC-12)	8.2	7.6	0.6
Textron Aviation (Beechcraft King Air)	7.2	7.1	0.1
Rotorcraft			
Bell Helicopter	7.2	7.5	-0.3
Airbus Helicopters	7.1	7.2	-0.1
Leonardo	7.0	6.3	0.7
Sikorsky	6.3	6.3	0.0

* Listed in order of the 2017 overall average. Ties are listed alphabetically. Bold indicates highest number in each category.



Bombardier Business Aircraft

NEWER JETS

Gulfstream retained first place in the newer business jets category, climbing to an 8.6 from 8.4 last year. In last year's survey, Gulfstream tied in this category with two other OEMs, Embraer and Dassault, and with its own midsize jets. Coming in second place this year was Embraer, with a rating of 8.4 (unchanged from last year) followed by Dassault in third with a rating of 8.3, down 0.1 from last year.

Bombardier's Globals climbed even more in this category, to 8.2 from 7.8 and garnering fourth place. Gulfstream's newer midsize jets saw a drop this year to 8.0 from 8.4, moving it into a tie for fifth place with Textron Aviation's Citation series.

In sixth place this year is Bombardier's Challenger series, down 0.4 to 7.8. Textron Aviation's Hawker series managed a solid 0.5 climb to 7.7 this year, among the largest gains for any OEM, putting it in seventh place, followed by Bombardier's

Learjet series, down 0.4 to 7.3.

In the newer jets survey categories, Embraer scored highest for overall aircraft reliability at 9.1, as well as technical reps, technical manuals and warranty fulfillment.

Gulfstream's large-cabin jets were ranked tops for factory-owned service centers, parts availability and AOG response.

Other high ratings went to Dassault for cost of parts, Gulfstream midsize jets for authorized service centers and Textron Aviation for maintenance tracking programs.

OLDER JETS

Bombardier's Challenger and Learjet series won the top place in the older jets category, with Learjet climbing 0.1 to tie the Challenger's 8.0 rating (same as last year). In third place is Bombardier's Global series, down 0.2 to 7.9.

Dassault takes fourth place with a 0.1 drop to a rating of 7.8, followed by Gulfstream large cabins at 7.6, down 0.3.

Textron Aviation's Citations, Premier/Beechjet/Hawker 400 series and Hawker jets are in fifth, sixth and seventh place, respectively. The Citation series dropped slightly, down 0.1 to 7.6, while the Premier/Beechjet/Hawker 400 series saw a decent bump, up to 7.4 from 7.0. Hawker jets saw a rating decline to 6.1 from 6.7.

The older jets categories feature Bombardier Challengers with the highest overall aircraft reliability ranking at 9.0. The company's Learjet series also did well here, with high rankings for factory-owned service centers, authorized service centers, cost of parts, AOG response and warranty fulfillment. Bombardier Globals scored high in technical manuals and technical reps.

Other high scorers: Dassault for parts availability and Gulfstream large cabins for maintenance tracking programs.

TURBOPROPS

Pilatus Aircraft continues to lead the rankings for newer turboprops, with a solid boost of 0.3 this year to an 8.1 rating. But Textron Aviation's King Air series is catching up, with the highest jump in rankings for all airplanes this year, up 0.6 from 7.4 to 8.0.

Among older turboprops, Mitsubishi reigns, at 9.2 and the sole rating above 9.0, although this is down 0.1 from last year. Textron's older King Airs remain in second place, with a 6.8, down 0.2 from last year.

In the overall aircraft reliability category for newer turboprops, Pilatus and Textron Aviation shared a top rating of 9.3, the second highest in this category. Top Pilatus scores were for authorized service centers, cost of parts, warranty fulfillment, technical manuals and technical reps. Textron Aviation's high rankings were for factory-owned service centers, parts availability and maintenance tracking programs.

On the older turboprop side, Mitsubishi operators ranked the company with the highest overall aircraft

SURVEY RULES AND METHODOLOGY

As with **AIN** Publications' previous annual Product Support Surveys, the objective this year was to obtain from the users of business jets, turboprop airplanes and turbine-powered helicopters statistically valid information about the product support provided by business aircraft manufacturers over the last year and to report this information to our readers. The ultimate goal of the survey is to encourage continuous improvement in aircraft product support throughout the industry.

This survey was conducted via a dedicated website, created by **AIN** from the ground up to provide improved ease of use and to encourage greater reader participation. **AIN** emailed qualified readers a link to the survey website and also sent a postcard invitation with login credentials to the survey website.

The survey website was open from May 1 to June 9. Respondents were asked to rate individual aircraft and provide the tail number, age (less than 10 years old or more than 10), primary region of service and whether they used factory-owned or authorized service centers, or both. Respondents were also asked to rate, on a scale from 1 to 10, the quality of service they received during the previous 12 months in the following categories:

- **Factory-owned Service Centers**—cost estimates versus actual, on-time performance, scheduling ease, service experience.
- **Authorized Service Centers**—same as above.
- **Parts Availability**—in stock versus back order, shipping time.
- **Cost of Parts**—value for price paid.
- **AOG Response**—speed, accuracy, cost.
- **Warranty Fulfillment**—ease of paperwork, extent of coverage.
- **Technical Manuals**—ease of use, formats available, timeliness of updating.
- **Technical Reps**—response time, knowledge, effectiveness.
- **Maintenance Tracking Programs**—cost, ease of use, accuracy, reliability.
- **Overall Product Reliability**—how the product's reliability and quality stack up against the competition.

Respondents were also asked to recognize individuals who have provided them with exceptional product support and service. The full list of these people is available online at www.ainonline.com/above-beyond-2017.

The 2017 **AIN** Product Support Survey results for aircraft are published in this issue, avionics will be featured next month and engines will follow in October. ■

reliability number, 9.7. The company's top categories were factory-owned service centers, authorized service centers, parts availability, cost of parts (the highest score for any OEM), AOG response, warranty fulfillment, technical manuals, technical reps and maintenance tracking programs.

Not enough readers responded with ratings for other turboprop types such as Piper and Daher, so these weren't included in the results.

ROTORCRAFT

Rotorcraft are not split into age categories in the

survey, but of note this year is Leonardo's swift rise, putting it near the top rankings enjoyed by Airbus and Bell, and also its 8.0 top rating for overall aircraft reliability.

This year, top ratings in the survey categories went to Bell with a 7.1 for authorized service centers, parts availability, technical manuals, technical reps and maintenance tracking programs. Airbus scored highest in factory-owned service centers and AOG response. In addition to its high rating for overall aircraft reliability, Leonardo scored high on cost of parts and warranty fulfillment. □

What have you done for me lately?

Each year, AIN asks aircraft manufacturers to submit summaries of key improvements in their product support implemented during the past year, and the following reflects the responses of those that chose to participate.

AIRBUS CORPORATE JETS

Airbus Corporate Jets expanded its service center network with the addition of Sabena Technics MRO facilities in Bordeaux, France, and Jet Aviation facilities in Basel and Dubai. The authorized ACJ service center network now consists of a half-dozen other MRO facilities in the U.S., Europe, the Middle East and Asia, augmented by 220 MROs that can work on Airbus aircraft, along with 300 Airbus field representatives. The ACJ fleet numbers 180 aircraft.

Airbus Corporate Jets provides support services through a single point of contact at its corporate jet customer care center (C4you) team, along with dedicated customer support directors, training and customized maintenance programs.

BOMBARDIER BUSINESS AIRCRAFT

On May 18, Canadian OEM Bombardier officially opened its London service center at Biggin Hill Airport. Bombardier has five service centers in the U.S. (Hartford, Conn.; Fort Lauderdale,

Fla.; Dallas; Wichita; and Tucson, Ariz.) and four international ones: Biggin Hill, Berlin (LBAS—a joint venture with Lufthansa Technik), Singapore and Tianjin, China. There are also 50 Bombardier authorized facilities.

In April, Bombardier unveiled its joint venture with Tianjin Airport Economic Area, a service center at Tianjin in northeastern China that will provide maintenance, repair, overhaul and other services. The new 95,766-sq-ft facility provides hangar space, offices and back shops.

The Tianjin service center received its Civil Aviation Administration of China certification to support the Globals, Challenger 604, Challenger 605 and Challenger 850. This means the center can perform 96-month inspections for 600-series Challengers as well as 120-month inspections for Globals. It will also serve as the manufacturer's regional parts depot. Currently, there are 280 Bombardier business jets based in Asia.

Other improvements: adding 200 technicians and project managers to the Bombardier service

2017 Category Ratings by Newer and Older Aircraft

	Overall Average 2017	Overall Average 2016	Rating Change from 2016	Factory Owned Service Centers	Authorized Service Centers	Parts Availability	Cost of Parts	AOG Response	Warranty Fulfillment	Technical Manuals	Technical Reps	Maintenance Tracking Programs	Overall Aircraft Reliability
Newer Business Jets													
Gulfstream (G300-G650)	8.6	8.4	0.2	8.3	8.5	8.9	6.9	9.0	9.0	8.6	8.9	8.8	8.9
Embraer (Phenom, Legacy, Lineage)	8.4	8.4	0.0	7.5	7.7	8.1	6.9	8.7	9.1	9.0	9.3	8.4	9.1
Dassault (Falcon)	8.3	8.4	-0.1	7.2	7.6	8.9	7.3	8.7	9.0	8.6	9.1	7.9	8.9
Bombardier (Global)	8.2	7.8	0.4	7.9	8.3	8.0	6.6	8.5	8.7	8.3	8.9	8.9	8.5
Gulfstream (G150-G280)	8.0	8.4	-0.4	7.7	8.7	7.8	6.2	8.4	8.7	7.2	9.1	8.5	8.5
Textron Aviation (Cessna Citation)	8.0	8.1	-0.1	7.7	7.9	8.2	6.9	8.2	7.9	8.2	8.1	8.3	8.7
Bombardier (Challenger)	7.8	8.2	-0.4	7.0	7.6	7.3	6.3	7.6	8.5	8.0	9.3	8.3	8.3
Textron Aviation (Hawker)	7.7	7.2	0.5	7.2	7.9	6.8	5.8	7.8	7.8	8.3	8.7	9.0	8.4
Bombardier (Learjet)	7.3	7.7	-0.4	6.4	7.6	7.2	6.6	7.1	7.6	7.6	8.4	7.4	7.5
Older Business Jets													
Bombardier (Challenger)	8.0	8.0	0.0	6.7	7.9	7.9	6.6	8.0	8.6	8.3	8.7	8.5	9.0
Bombardier (Learjet)	8.0	7.9	0.1	7.5	8.1	7.6	7.0	8.1	8.8	7.9	8.5	8.6	8.4
Bombardier (Global)	7.9	8.1	-0.2	7.0	7.4	7.5	6.0	8.0	8.4	8.5	9.1	8.4	8.3
Dassault (Falcon)	7.8	7.9	-0.1	7.1	7.3	8.0	6.5	8.0	8.4	7.9	8.4	8.0	8.6
Gulfstream (GII-GV, G300-G550)	7.6	7.9	-0.3	7.3	7.7	7.0	5.7	7.6	8.2	7.8	8.3	9.0	8.4
Textron Aviation (Cessna Citation)	7.6	7.7	-0.1	7.4	8.0	7.9	5.7	7.6	7.3	7.9	7.8	8.1	8.1
Textron Aviation (Premier, Beechjet 400/400A, Hawker 400XP)	7.4	7.0	0.4	7.4	7.2	7.4	5.6	7.2	6.5	7.7	7.9	8.9	8.2
Textron Aviation (Hawker)	6.1	6.7	-0.6	4.8	6.4	6.0	4.0	5.9	8.0	5.9	6.7	8.3	7.2
Newer Turboprops													
Pilatus (PC-12)	8.1	7.8	0.3	7.4	8.1	7.8	7.4	7.6	8.6	8.2	8.3	8.0	9.3
Textron Aviation (Beechcraft King Air)	8.0	7.4	0.6	8.0	7.8	8.3	6.5	7.7	8.1	7.9	8.2	8.6	9.3
Older Turboprops													
Mitsubishi (MU-2, Solitaire, Marquise)	9.2	9.3	-0.1	9.3	8.9	9.3	8.2	9.7	9.6	9.4	9.8	8.7	9.7
Textron Aviation (Beechcraft King Air)	6.8	7.0	-0.2	7.1	6.9	7.4	5.0	6.2	6.1	7.2	7.0	7.0	8.0
Rotorcraft (all age Rotorcraft)													
Bell Helicopter	7.2	7.5	-0.3	6.6	7.1	7.3	5.8	6.5	6.8	7.8	8.6	8.0	7.6
Airbus Helicopters	7.1	7.2	-0.1	6.8	7.0	6.8	5.4	7.2	7.3	7.6	7.5	7.4	7.8
Leonardo	7.0	6.3	0.7	6.6	6.6	6.6	6.0	7.0	7.6	7.4	7.5	7.3	8.0
Sikorsky	6.3	6.3	0.0	6.3	6.6	5.3	5.3	5.3	6.4	6.3	8.3	6.6	6.9

Listed in order of 2017 overall average. Ties are listed alphabetically. Bold indicates highest number in each category

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center network, and boosting the customer response team truck fleet to 17 with new vehicles based in Scottsdale, Ariz., and Van Nuys, Calif.

Earlier this year Bombardier added five line maintenance stations in Europe, where 550 of its 4,700 aircraft are in operation. The new centers are located in Linz, Austria (through Bombardier's acquisition of AAS AirSupport); Nice and Cannes in France; and Milan and Olbia (Sardinia) in Italy. They join nine existing stations authorized to provide scheduled and unscheduled line maintenance and AOG support for the Learjet, Challenger and Global lines. All 14 are linked to Bombardier's 24/7 Customer Response Centre and the OEM's customer support team.

Earlier this year, Bombardier implemented an "on-the-spot price-match guarantee" on parts, which are covered by a two-year warranty.

Although not directly related to maintenance, Bombardier helps its operators understand and meet new requirements for flying in airspace where new communication, navigation, surveillance and air traffic management equipment is becoming mandatory. This includes assistance with obtaining letters of authorization for Fans-1/A and Link 2000+, under Bombardier's operational guidance material program. The service is free for Bombardier operators and can be accessed on Bombardier's customer portal. To further assist operators, Bombardier avionics and operations experts are available to help when the guidance material isn't sufficient.

DAHER

Daher has improved the maintenance program for the TBM single-engine turboprops to reduce direct operating costs and boosted parts inventory



Embraer Executive Jets

in Florida by another 20 percent. In addition to adding to its worldwide distributor and service center network, Daher designated a full-time training manager. All TBM network technicians can take advantage of free technical training at Daher's Pompano Beach, Fla., facility.

As Daher adds capabilities with the newer TBM models, many of these features are available for retrofit on older aircraft, some free of charge. For example, new capabilities for the TBM's Garmin avionics suites such as spoken voice warnings and emergency descent mode are free for TBM owners. Retrofit options are offered for angle-of-attack, underspeed protection, electronic stability protection, lower landing gear doors, LED landing and taxi lights and Garmin's Flight Stream wireless gateway.

DASSAULT AVIATION

A major focus for Dassault Aviation is interacting more with customers, not only through customer events but also by adding service facilities closer to where Falcon operators are based, according to Geoff Chick, senior vice president of customer

service. "We wanted to get closer to the customer," he said.

This effort is exemplified by Dassault's new "core customer service" effort, which is aimed at "integrating more than ever before the whole customer experience," he said. This is a worldwide effort, but also coincides with leadership changes at Dassault's North American service centers. The goal is to improve communications with customers, to make sure that airplanes leave the service center without any outstanding discrepancies and ensure swift follow-up for any issues that develop, Chick explained.

To make this happen, Dassault has begun developing processes and training for front-line customer service personnel such as technical representatives, customer service managers, customer project managers and even maintenance salespeople. "These are processes developed over time," he said. "Some require refinement, and we have developed new processes in some cases." This effort was driven by customer feedback, he added, "and also a critical analysis from within the company."

Dassault expanded its service center network

with a new factory-owned facility in Bordeaux-Mérignac, France, and new authorized service centers (ASCs) in Dinard (France), Kuala Lumpur (with Hawker Pacific), Helsinki and Vienna (with Aero-Dienst). The Dinard ASC is also an authorized paint facility. The spares warehouse adjacent to Dassault Falcon Service in Le Bourget, France, is running at maximum capacity, so Dassault is building a new warehouse there, and this should open in the middle of next year. To accommodate fleet growth in Russia, Dassault added a Falcon service satellite in Moscow, as well as a field technical representative and a spare parts regional distribution center. Dassault's global network now stands at 51 ASCs.

At its annual operator advisory board, and via working groups and e-forums, Dassault representatives met with 120 customers face-to-face. The company also held M&O events in eight locations, which 1,700 participants attended. In February, Dassault held its first "Falcon Classic" event to serve operators of the Falcon 10, 20 and 50. The event fielded vendors that support the older Falcon models, among them some non-Falcon-authorized maintenance facilities, and 100 operators participated. Issues discussed: obsolescence concerns, parts availability, alternate solutions for repairs and the decline of hull values. "We listened," said Chick, "and we will be implementing some of these things in the future."

The Falcon 8X entered service last year, and since then Dassault has added customer support capabilities for 8X operators. Falcon 7X operators are seeing lower operating costs thanks to extended scheduled maintenance intervals, with A checks now every 10 months instead of nine months. The Falcon 2000 and 900 interval has been extended to 12 months from eight months, and the 8X is 12 months as well. "This increases availability and reduces the maintenance cost over the life of the airplane," Chick said.

On the training front, Dassault offers immersive practical training, which allows technician trainees to explore the tightest spaces inside the

aircraft using virtual reality tools.

The Maintenance Doc app for iOS, released last year, is designed to keep maintenance manuals up to date and allows technicians to create bookmarks and notes, email documents and easily bring the manuals to the work site. Dassault's customer portal now provides a free tool to help operators view fault codes. The tool automatically decodes and presents information in a readable format, and it is available for Falcon EASy-equipped models and all current-production Falcons.

EMBRAER EXECUTIVE JETS

Embraer continues to expand its service capabilities and added four authorized service centers, in Germany, Australia, Chile and Russia. There are now 42 Embraer field-support representatives around the world. On the parts front, Embraer has added to inventories.

New technical developments: 59 aircraft enhancement options, as well as a longer TBO for the Phenom 100 and 300 landing gear. Nose and main landing gear TBOs are now 10 years or 12,000 flight cycles, up from eight years.

Embraer's global customer support operation has improved "next-flight-out" performance to 45 minutes from two hours. At its contact centers, the company's support personnel handle 10,000 customer interactions per month, and they have driven the telephone call response time to seven seconds and e-mail response time to less than 15 minutes.

Embraer's AOG response time is now down to within four hours for 95 percent of cases.

Last year, Embraer hosted 400 customers and operators at nine conferences in Europe, Brazil, U.S., India, Indonesia, China and Dubai.

GULFSTREAM AEROSPACE

Last year Gulfstream held operator forums in London, Vienna, Orlando and White Plains, N.Y., followed by forums this year in San Jose (Calif.), Hong Kong, Shanghai, Dallas and Geneva. All these



forums focused on maintenance and operations and covered “fleet status, mandate and technology updates, maintenance management, technical training and pending technical bulletins,” according to Gulfstream. The company also outlined its fleet support services to ensure operators make use of all available offerings.

In June, Gulfstream invited customers to the second virtual operators and suppliers conference, designed to help customers with information on model-specific programs, regulatory mandates, select aircraft systems and critical inspections. The three-day virtual conference is designed to assist pilots, technicians, flight attendants and other operations personnel, and they are invited to submit questions in advance, then participate in live question-and-answer sessions.

New service capabilities: doubling the number of field service representatives in Hong Kong to four from two. The company also has two FSRs in China and one each in Japan, Singapore, Australia and India, and all of them are there to support a regional fleet that has grown to 314 aircraft. The company’s Asia-Pacific spares

inventory has reached \$55 million in value, with facilities in Hong Kong, Beijing, Singapore and Melbourne, Australia.

For European operators, in May Gulfstream placed a field and airport support team (Fast) truck at Paris Le Bourget Airport. Another Fast truck was added in January in Fort Lauderdale to complement Gulfstream’s West Palm Beach service center. The Fast team operates from a truck equipped with tools and special equipment for Gulfstream maintenance, not only to get AOG customers back in the air quickly but also for line maintenance, engine changes, post-flight, storage and minor scheduled inspections and minor cabin repairs.

New service center approvals earned during the past year: Bermuda and the Cayman Islands for Gulfstream’s Brunswick, Ga. facility and Aruba for its Las Vegas service center.

MITSUBISHI HEAVY INDUSTRIES AMERICA

With a continued strong commitment to product support for the remaining fleet of 260 MU-2 turboprops, Mitsubishi Heavy Industries America (MHIA) in April took over all product support



Cessna Citation XLS+

DAVID McINTOSH

functions from former contractor Turbine Aircraft Services. Now called the MHIA-Aircraft Product Support Division (MHIA-APD), the organization is responsible for customer support, engineering, technical publications, quality assurance and parts. A network of MU-2 authorized service centers is available for maintenance services.

An important part of supporting the MU-2 fleet has been the biennial Pilots Review of Proficiency (Prop) seminars, which are free for anyone involved with MU-2 operation or interested in learning more about the airplane. Next year, MHIA-APD is holding one Prop seminar, April 19-20 in Miramar Beach, Fla. The company is helping put on an MU-2 fly-in from September 29 to October 1 in Coatesville, Penn., and will exhibit at the NBAA Convention in October in Las Vegas. Regional gatherings are also planned, but dates have not yet been announced.

PIAGGIO AEROSPACE

Under new leadership, Piaggio Aerospace has recommitted to supporting the fleet of Avanti twin turboprops and developing upgrades to modernize avionics, lower maintenance costs and improve operations. According to the company, “Our primary goal in 2017 is to continue to put customers first, by offering them the highest level of support

throughout the life of their aircraft.”

Two main locations manage Piaggio product support: the customer service headquarters in Genoa, Italy, and a branch office in Fort Lauderdale, Fla. At last year’s NBAA Convention, Piaggio announced it had signed authorized service center agreements with eight U.S. maintenance providers: Greenpoint Aerospace, Denton, Texas; Intercontinental Jet Service, Tulsa, Okla.; Mather Aviation, Rancho Cordova, Calif.; Signature TechnicAir, Scottsdale, Ariz.; Stevens Aviation, Greenville, S.C.; Turboprop East, North Adams, Mass.; and West Star Aviation, East Alton, Ill. The eighth was an extension of Piaggio’s existing agreement with Banyan Air Service of Fort Lauderdale, Fla.

One of the most significant upgrades is the ability to add LPV approaches to the Avanti’s Rockwell Collins Pro Line 21 avionics suite, and another important upgrade is ADS-B OUT. The avionics upgrades are available with minimal downtime because Piaggio has arranged for a dedicated exchange program with a pool of components that can be quickly rotated into customers’ airplanes.

Enhancements to the maintenance program will help operators fly longer between maintenance events, and Piaggio will help operators develop customized maintenance programs. A progressive maintenance program is now

available, and this allows dividing maintenance activities “into shorter, more frequent phases, customized to their specific needs in terms of flight operations, available maintenance locations and staffing,” according to the company. An upcoming revision to Chapter V in the maintenance manual pulls some A and B check tasks out of the 200- and 600-hour events. This will allow operators to accomplish these tasks separately during times when the airplane isn’t flying, shortening the time needed to conduct the inspection events, and thus increasing overall availability.

A new landing gear service bulletin released earlier this year is available for all Avanti IIs. The retrofit landing gear introduces drive-by-wire digital nosewheel steering and proximity sensor-based control logic, which replaces traditional weight-on-wheels switches. TBO for the new landing gear is extended to 15 years or 15,000 landings, which cuts overhaul cost in half, according to Piaggio. Anti-skid braking and LED taxi and landing lights are optional. Piaggio is offering the new landing gear to customers at a price “comparable to the overhaul of their already installed components.”

By year-end, Piaggio will offer new Parker steel brakes as a retrofit. This should cut brake maintenance costs up to 70 percent.

Finally, Piaggio is adding to its parts inventory in Genoa and Fort Lauderdale, and improving communications with customers via a new newsletter and with a new customer relations management and web portal scheduled to launch in the fourth quarter.

PILATUS AIRCRAFT

The Pilatus PC-12 fleet has grown to 1,500 airplanes (700 of them PC-12 NGs) delivered and has logged 6.1 million hours flown (1.1 million for the NG fleet).

During the past year, Pilatus has been preparing for certification and deliveries of the PC-24 jet, with three prototypes logging flight-test time

ABOVE AND BEYOND

We asked AIN Product Support participants to list their favorite support providers and what they like about the service they receive. Here are some of the companies and people respondents chose to recognize. Read the full list at www.ainonline.com/above-beyond-2017.

OEMs	Comment
Chris Richard <i>Bombardier</i>	Always goes above and beyond to support the customer.
	Chris is our Tech rep. for the 605. He is extremely knowledgeable and always available night or day. If he doesn't know the answer he will quickly find the right person who does.
Dean Eechaute <i>Bombardier</i>	Learjet FSR covering upper Midwest. Is the best FSR I have been associated with in my 40 years of aviation. Extremely knowledgeable with the aircraft, engines, and systems. Will not settle for anything but solving your issue. Customer orientated to say the least!!!
	Dean is our “go to” guy for support on the Lear 45. His product knowledge is amazing. Dean will work on an issue until it is resolved. Dean is an asset to Bombardier with his dedication to customer support, the type of support that drives product loyalty!
Miguel Doskocz <i>Bombardier</i>	Great support
Steve Block <i>Bombardier</i>	Steve is the model tech rep for all reps to follow. He knows every issue we have had, he knows the history of our airplanes. And he fights for us to get the support and coverage we need to keep our airplanes flying.
Lloyd Hardwick <i>Dassault</i>	He is the most reliable and most efficient technical representative I have ever worked with. Professional and knowledgeable.
	He is very knowledgeable of Dassault products and so much more and goes out of his way to engage and assist 24-7.
Tom Kouters <i>Dassault</i>	Tom is our CSM and has always gone above and beyond to try to solve all our issues we might encounter with Dassault.
	Interested and close in follow up of our fleet
	Tom is the best tech rep around. He's pro-active, anticipates problems, fights for us at his employer. Always in a very friendly manner
Alessandro Rossi <i>Embraer</i>	He helps a lot our operation here in Brazil.
	He was always very attentive and helpful.
Rene Baudet <i>Embraer</i>	The guy very quick answer and support us, any time, anywhere.
	The “go to” man for all my questions. He has the answers or will hunt down an answer immediately. Thank you Rene.
	Rene is always extremely helpful whenever we have an issue with the aircraft. His commitment to the company and ensuring any issues are dealt with in a timely manner are second to none.
Sanjay Pandey <i>Embraer</i>	Very responsive and knowledgeable...always keeps in touch...
	He has been very responsive and customer orientated
	His job day in day out and his dedication is just fantastic. Great person to represent Embraer in Asia.

and the opening of a new assembly hangar at the company's headquarters in Stans, Switzerland.

For PC-12 operators, Pilatus expanded the customer support team, and this year hosted the first utility/fleet operators conference designed to serve the needs of high-utilization PC-12 operators.

The company released a new iOS quick reference handbook app. The MyPilatus portal now offers a connected flight deck pilot's guide, a compilation of interior cleaning documents and a replacement part numbers list.

TEXTRON AVIATION

Textron Aviation's web-based customer portal is rolling out in phases this year, enabling customers to monitor progress and manage maintenance on their aircraft during visits to the 19 Textron Aviation factory-owned service centers. So far, 500 operators have signed up for the portal since it went live a few months ago.

Owners, operators and directors of maintenance can access the customer portal via web browsers running on any computer or mobile device. The portal allows them to initiate a service request, track maintenance events, order parts, review and approve maintenance tasks, view invoice history and pay for services.

In the past, explained Michael Vercio, vice president of product support, if technicians found a discrepancy during a maintenance event, the customer service representative would have to contact the customer to explain the issue and seek approval to make the repair, a process that could entail a lot of back-and-forth communications. With the customer portal, the owner or operator can instantly view details about the issue and related cost estimates, then approve the repair or ask for further information. Once approved, that repair automatically gets added to the invoice. "The customer doesn't have to talk to anyone else to get it done," he said.

Customers can use the portal to manage their entire fleet, too. The portal shows the progress

OEMs (cont.)	Comment
Sanjay Pandey <i>Embraer</i>	Sanjay has always gone beyond the call of duty to provide us with the best support for our aircraft. Not only is he a very good person, but he goes out of his way, divulging into his personal time, to ensure our aircraft is always flying, and flying safely. This man needs a raise !!!
	Always available when needed and coordinates, and follows up tirelessly until the job is complete.
	A real customer support! Enthusiastic and loves what he does. I give him 9 out of 10!
Vinicius Doche <i>Embraer</i>	Very helpful to maintain our aircraft flying!
	He gets all the answers you need quickly.
Eric Holliday <i>Gulfstream</i>	Eric is a super knowledgeable tech rep. He follows up on any issues brought to his attention. He is always willing to jump in and assist with troubleshooting a problem. We usually see him a couple of times a month even if there is nothing wrong with the aircraft.
	Eric is dedicated to supporting his customers 24/7 so they can complete the aircraft's missions safely and on time. On-site support is unparalleled!
Tom Klenke <i>Gulfstream</i>	Always accessible and willing to provide support for our aircraft at any level. Extremely knowledgeable on the aircraft and will do what is necessary to support our needs.
	Goes the extra mile to meet your needs and get your plane in and repaired and out on time.
Authorized Service Centers	
Joe Megna <i>Carolina Turbine Support</i>	He goes above and beyond when it comes to avionics repairs and is extremely knowledgeable and efficient.
	Joe is always available to troubleshoot over the phone, provides support to my MU-2 like no other.
Mark James <i>Intercontinental Jet Service</i>	Mark has been consistently available for issues with the MU-2 and both amazingly accurate and generous with his time. Could not ask for better support person.
	Mark provides consistently outstanding, personalized customer service and product support. He and his team of technicians have gone above and beyond to serve our aircraft and keep us flying reliably. Intercontinental Jet Service Corp has provided AOG service that goes far beyond industry standards, and Mark is immensely accessible and communicative throughout all phases of the maintenance process.
Mark James & Neal James <i>Intercontinental Jet Service</i>	Mark James is my go-to guy on Mitsubishi aircraft and keeps my MU-2B-20 flying even though it is a 47 year old turboprop. Neal James is a TPE-331 expert. I would prefer he open my engines over anyone I know.
Mark James <i>Mitsubishi</i>	Has a wealth of knowledge about the MU-2 and is always willing to share his knowledge and diagnose mechanical issues.
	24/7/365 availability to MU-2 owners for consultation on all aircraft maintenance issues, regardless of where owner actually maintains aircraft.
	Provides fabulous support and information.
	Always available for very competent assistance with all servicing/AOG needs.
	Knowledgeable, courteous and always available

of the maintenance event as a percentage, to help the customer see how the job is progressing. Of course the customer can always call the service rep for more information. In a future version of the portal, Textron Aviation plans to add photos documenting the maintenance event.

"Textron Aviation's aircraft play an important role in the productivity and success of our customers, and the service team continues to develop solutions to minimize aircraft downtime," said Kriya Shortt, senior vice president, customer service. "The new customer portal is yet another example of how we are investing to deliver on that commitment." Customers

provided feedback to help with the design and development of the portal, and then helped test it. “The result is an intuitive platform that allows customers to manage their aircraft maintenance more efficiently,” she said.

The portal could also help customers not feel compelled to send technicians to monitor maintenance events at Textron Aviation service centers. “We will continue to have an open-shop environment,” Shortt said, “and we like those relationships because it makes it real for both parties. But if you have something that you need to do, you should be able to leave with confidence, click open the portal, and say, ‘You said the aircraft would be ready Tuesday at noon, you’re at 90 percent, I believe you’re going to be done.’”

The customer portal is the latest addition to Textron Aviation’s factory-direct support, joining the 1View technical publications, online parts ordering, same-day invoicing and 1Call support that is also available for customers in Europe and Central and South America.

The 1Call system enables Citation, Hawker and Beechcraft customers to make a single call for AOG and unscheduled maintenance. Specialists marshal needed resources and follow the problem until it has been resolved, using visual displays that track all elements of providing the fix. This includes prioritizing technical support, expedited parts ordering, arranging for alternative lift or if needed, deploying a mobile service unit.

By the Numbers 2017	
Respondents who rated aircraft	875
Respondents who completed the survey in its entirety	777
Aircraft rated	2,779
Aircraft models receiving ratings	152
Minimum ratings required to be included in the data	20

“We’re looking after 15,000 turbine aircraft that interact with us, in some form or fashion. A number of customers tell us that we’ve delivered for them and made doing business with us easy,” said Shortt, adding that “there will always be an opportunity where we didn’t meet their expectations. Those are learning experiences; if we can understand and get to the root cause of the problem, we can put a process in place.”

Shortt, who has been in her new role for less than a year, wants to make sure that the lines of communication are open and that the 3,000 employees that provide product support are empowered to take care of customer needs. “If we had a breakdown in communication,” she said, “let’s do a postmortem on what happened, where we didn’t delight the customer. Did our own process get in the way? There will be times when we haven’t met the bar, and those are our opportunities to learn and do better.”

One of the ways that Textron Aviation drives improvement into its products is to work with the manufacturing quality team. “If we see an emerging issue, how can we find the root cause and drive that into the line flow, to yield a better product?” she asked. “And how can we get improvements into the field faster as well?”

In the past, Cessna and Beechcraft were known for discouraging customers from seeking modifications from third parties, but that has changed significantly under Textron Aviation. For example, King Air buyers can opt for Raisbeck modifications to be installed during production instead of after delivery. And Textron has partnered with companies such as Tamarack Aerospace for installation of active winglets on CitationJets and with avionics manufacturers Garmin, Honeywell and Rockwell Collins on retrofit flight-deck upgrades and ADS-B packages.

“We’re interested in maintaining relationships with customers,” Shortt explained. “Listening to them allows us to develop [and source] modifications, like Tamarack. That was a great win. You will see us doing more of that.”

AIRBUS HELICOPTERS

To continue improving customer support, Airbus Helicopters has for many years hosted customer focus groups in North America, Europe and Asia, soliciting feedback to prioritize improvements and validate suggested improvements, according to the company. The process is also used to address “top product irritants” and test remedies with customers before releasing them for the entire fleet.

Some fixes that Airbus Helicopters offers for those irritants are a new quick-disconnect magnetic plug for the H125 and H130. Another example is an air-intake and fan-hopper improvement for the H130, which improves reliability and reduces weight by 1.5 pounds.

Other recent efforts to lower direct operating costs have targeted reductions in man-hours per flight hour for scheduled maintenance. This resulted in decreasing parts-by-the-hour rates by 19 percent over the past four years for the H135. For the H130, man-hours per flight hour are down 10 percent, the number of scheduled maintenance stops has been cut in half and the helicopter’s 12-year inspection has been eliminated.

On the spares front, Airbus Helicopters’s network performance “is the best it has ever been,” according to the company, benefitting from improvements in order management and stocking processes, with U.S. performance improving significantly thanks to investments in inventory and “tight performance management.” Airbus also invested in its dynamic component shop to improve turn-around time and quality.

Customer feedback helped Airbus return to using annual price lists and to ensure “that prices are fair and consistent. We have now repriced 32,000 parts in this way.” Spares documents are now digitally signed before packaging, and European and U.S. customers can download these documents on the Airbus customer portal.

The Airbus Helicopters Orion technical documentation viewer now has more photos to help technicians understand tasks and avoid misinterpretation. Customers can also more easily add their own repair criteria to maintenance tasks. In March, a new iOS-based tablet eTechPub app was released to improve the customer experience, and this can be run in offline mode for the H125 and H130. The rest of the Airbus fleet will be added this year.

Airbus helicopter operators can now use the FleetKeeper mobile and web application as a replacement for the technical logbook. FleetKeeper is compatible with other helicopter types, and it “allows pilots, airworthiness managers and mechanic teams to record flight reports, track technical events and transfer data among each other in real-time and at the push of a button.”

At Heli-Expo earlier this year, Airbus Helicopters released the FlyScan health and usage monitoring system (Hums). FlyScan, which monitors certain parameters, allows Airbus Hums experts to recommend proactive maintenance that will improve helicopter availability and safety. Airbus estimates that operators will average one fewer AOG event per year and cut their per-helicopter maintenance burden by 7 percent.

BELL HELICOPTER

“We’re constantly looking at our services and products, and comparing that to what our customer needs,” said Glenn Isbell, Bell Helicopter executive vice president of customer support services. He explained, “We could spend a ton of energy, but that could be a waste of time for the customer. Doing the right things in the right ways, and how we’re doing that, is much more important.”

One of these ways is helping customers see how Bell’s Customer Advantage Plans (Cap) can help them manage maintenance costs. Instead of ordering parts from Bell and other vendors, operators can source everything within the Cap, including optional coverage for non-standard kits. “We think we’re doing this in a way that’s



priced well and adds value,” Isbell said. For smaller operators, Cap helps keep costs down not only by smoothing out expenses by paying for Cap at an hourly rate instead of all at once when a big event comes due. The program also allows them to participate in the fleet pool, which helps keep rotatable parts costs lower for all Cap members.

Fleet operators also benefit from the pool effect, and now Bell is opening Cap membership to fleets with no buy-in. “It makes sense for a lot of operators,” he said. “One size never fits all, but this will be in demand more and more over the next several years.”

Cap members have access to engine and full maintenance coverages, some available now and some to be added soon. When having maintenance done at the 100 Bell customer service facilities around the world, Cap members receive preferred rates. They also don’t have to wait for components to be serviced. For example, when an operator needs a gearbox overhauled, Bell will send

a zero-time rebuild to the operator right away so there is no downtime beyond the time needed to remove and replace the old unit.

Another key effort for Bell, starting last year but accelerating this year, was to improve shipping responsiveness, Isbell explained. “While most parts are consumed during scheduled maintenance,” he said, “we need to be able to react to unscheduled events. During the last two years, same-day and 24-hour shipping improved two fold. Ninety two percent of orders that come in that day get shipped that day.”

The percentage of parts shipped within 24 hours jumped significantly, to 94 percent. “We were under 50 percent previously in some cases,” he said. “It wasn’t as good as we wanted. There was a lot of focus to try to get better. I invest a significant number of dollars in inventory, so it’s there when the customers need it.” Bell’s core wholesale warehouse in Fort Worth, Texas, supplies North, Central and South America. Other facilities are in Calgary (Canada), Amsterdam, Singapore and Japan.

LEONARDO HELICOPTERS

After launching the TeamUp consolidation of customer support and training offerings earlier this year, Leonardo has expanded efforts to cut maintenance costs and build on its worldwide service capabilities. Leonardo employs 1,800 customer support and training personnel.

Customer advisory board and maintenance improvement team meetings have resulted in improvements in maintenance schedule intervals, including an extension of the AW139's main gearbox interval to 6,000 hours.

Leonardo has also invested in spares inventory forecasting, to improve parts availability worldwide. In North, Central and South America, parts availability at Leonardo's Philadelphia distribution facility has improved to 95 percent. The company's on-time delivery rate has reached 92 percent in the Americas.

"Just as we've fully rounded out and developed our product line, we've expanded our support to ensure it evolves with the demands of our customers," said Vittorio Della Bella, senior vice president for customer support and training, worldwide services. "These initiatives have reduced costs and improved reliability, better positioning our customers in today's challenging operating environment."

SIKORSKY

"Our journey to improve support began a year ago," said Dana Fiatarone, vice president, Commercial Systems & Services, "and we have been making continued investment and enhancement in response to our customers' feedback."

In March last year, Sikorsky opened its Customer Care Center, and this led to a 72-percent reduction in AOG events and shortened average AOG turnaround time by 66 percent. "At the same time," he said, "response time for routine orders also improved—another priority for us."

Sikorsky has opened four forward stocking locations around the world to improve parts

deliveries and hired 100 field service and technical representatives.

Operators can take advantage of Sikorsky's new S-92 and S-76 interactive electronic technical manuals (IETM), released earlier this year. These replace traditional paper or PDF-based maintenance manuals. "Simultaneously, we have been working aggressively to incorporate the maintenance data from all S-92 type certificate options into the publications," said Fiatarone.

To make looking up instructions for continued airworthiness (ICAs) for STCs easier, Sikorsky has added central libraries on the Sikorsky360 website, organized by individual tail number. "We populated these libraries with the latest revisions of those ICAs and established indexes with revision control to aid operators in assessing the currency of data in their possession," he said.

"Sikorsky firmly believes that customers will see productivity gains and improved safety with adoption of digital publications in the form of iFly Sikorsky and NextGen IETM products," he said. □



WINNERS

The following people were randomly selected as winners of a \$500 Amazon gift card for participating in our Product Support Survey.

MARC CONRAD
director

RUSSELL DICK
director of maintenance

KEVIN FLYNN
director of aviation maintenance

JOHN RICHARDSON
manager

BILL WHITE
chief pilot

Keeping Them Flying: Great Rescues 2016-2017

AIN asked business aircraft OEMs for examples of their product support organizations' greatest rescues during the past year. The following examples, in their own words, illustrate how the product support teams leaped into action to help keep customers in the air and on schedule. (Not all OEMs provided an example.)

BELL HELICOPTER

Recently, one of the company's EMS operators that is local [near Dallas] and on a Customer Advantage Plan needed a hub replacement for a 429. Glenn Isbell, executive vice president of company support, explained the event: "We have inventory in Tennessee, a rebuilt hub. We have a decision on whether to ship the rebuilt hub from Tennessee—it would be there in 24 hours—or we had a new one in Fort Worth. From an economic standpoint, it was cheaper to provide the rebuilt one. We looked at the situation, talked to the customer, then provided the new one. We had it over to them in a couple of hours. That night the helicopter ended up saving a life. Otherwise they wouldn't have gone on that EMS flight.

"Considering their mission, the better we know their business, helps us to be able to support them better. We made the right decision. We knew the customer's business and what the situation was. If you just order the part, and it's a financial decision, 24 hours is a great turnaround, but it wouldn't have met their mission. That reinforced that why we do what we do is important, and the ability to make those decisions and knowing their needs is important. Everything is not just an order in the system; there is customer need with everything that comes through.

"The other part that made me feel better: I had nothing to do with it. The guy who runs our Customer Advantage Plan group was the one who talked to the customer and made the decision. We

found out more about the issue and got it taken care of. That's a key measure that I have. If I'm integral to make everything right day to day, then we don't have the right organization built. I monitor that things are happening correctly where they should be happening. But the people who have context in those discussions will make better decisions. Escalating doesn't always make the decision in the right way.

"It was an exciting day for us, validating that we are doing things right. It's tough times for everybody, and those kinds of things, doing things the right way, taking care of the customer, it matters, and gives us more energy. It was a good thing to celebrate."

BOMBARDIER BUSINESS AIRCRAFT

Last Christmas, the owner of a Global 5000 called the manager of customer support at Bombardier Business Aircraft to notify him that his aircraft had been struck by another aircraft on a ramp in Wyoming, damaging the radome. The customer and his family needed to return home to Europe the following day. The busy holiday season coupled with the flight duration meant there were no charters available, and the chance of them returning home in time for New Year's Eve was looking unlikely.

Within two hours, Bombardier's Customer Response Centre had initiated two Parts Express charters, dispatched engineers from the Wichita service center and sent a replacement radome from Chicago. Work commenced immediately upon arrival, and despite no access to hangars and sub-zero temperatures, the radome was replaced, the aircraft was returned to service and was able to depart to Europe with the owner's family on board less than a day after the first call to Bombardier customer support.

DASSAULT FALCON

One Saturday in June a customer's 900LX went AOG for an engine oil chip detector upon arrival late at night in Augusta, Maine. The next flight was early the next afternoon back to home base to be in position for a critical multiple-leg trip. The Wilmington go team could not depart until the next morning and would have a six-hour drive, which would get them there nearly at the scheduled aircraft departure time.

The FalconResponse Falcon Airborne Support (FAS) airplane was called out for an early-morning departure the next day with the Teterboro go team and the suspected parts. A simultaneous issue was being addressed in Portland, Maine, requiring another go team. A go team that was positioned in Nantucket, Mass., was dispatched directly to the Portland AOG. The Portland AOG required additional tools from Teterboro, so these were added to the FAS airplane to Augusta rather than shipping commercially, saving significant time.

Upon arrival of the FAS aircraft in Augusta, the go team from Nantucket picked up their tools from the aircraft and proceeded to Portland. The FAS go team began troubleshooting and was able to return to service the customer's aircraft in Augusta in time for the scheduled reposition, thus allowing them to dispatch the upcoming trip.

GULFSTREAM AEROSPACE

During the World Economic Forum (WEF) this year in Davos, Switzerland, a G650ER became AOG nearby in Friedrichshafen, Germany, on the morning of January 18. This aircraft was transporting the chairman of a Fortune 100 company to and from the event, and was scheduled to return home the next morning.

The required parts were readily available in the Gulfstream distribution center, and the product support division made arrangements to launch immediately and directly to Friedrichshafen using a G550 demonstrator. However,

with the deadline for the customer's next flight fast approaching, Technical Operations suggested an even quicker solution.

The G650ER demonstrator was already in the region, just an hour away in Altenrhein, Switzerland. Using technicians pre-positioned to support customers attending the WEF, the required parts were removed from Gulfstream's demonstrator, transported to Friedrichshafen and installed on the customer's aircraft, returning it to service. The parts arriving on the G550 were installed on the OEM's G650ER instead, also allowing it to return to service that same day.

The customer made the flight home as scheduled and without interruption less than 24 hours after the AOG event began.

LEONARDO HELICOPTERS

An active firefighting operator in the U.S. was undergoing scheduled maintenance just before the start of the fire season. During the course of maintenance and inspections, an issue was found with a power control module that required further repair and could have lengthened the downtime of the aircraft when it was most needed to contain wildfires. Leonardo Helicopters's entire customer support team expedited this issue, with an order quickly obtaining the part from the vendor and getting it to the service center. The aircraft was returned to service on time and as scheduled to support the customer's critical fire-suppression operations.

PIAGGIO AEROSPACE

Mission 1: Tunis, Tunisia

Takeoff [in an Avanti] was planned for midnight with some local notables on board, black limousines and a formal ceremony. Immediately after takeoff a fire-warning light illuminated in the cockpit, and the passengers heard a related sound alert.

12:15 a.m.: With the proper procedures applied the aircraft landed uneventfully.

12:30 a.m.: A quick phone call between the captain and the Piaggio customer support help desk determined that it was quite clear the fire warning had sounded erratically, probably because of a fault in the fire-detection loop and associated sensors. The Piaggio Aerospace mobile repair team was alerted, and in a matter of minutes the logistics effort to dispatch a team of technicians started.

9 a.m.: Two technicians were at work on the aircraft and by 11 a.m., the aircraft was dispatched for service.

12 noon: Aircraft airborne, completing the mission.

Mission 2: In the more exotic airport of Entebbe, Uganda, just few hundred meters from the Equator.

On December 6 a series of several flights were planned on the same day with a turnaround time of 45 minutes between flights. An important contract with the government was under evaluation.

After the fourth landing, as soon as the crew started to taxi, something was wrong: the right brake was partially operating all the time, and the outcome was inevitable. The safety plug melted, releasing the pressure of the nitrogen contained in the tire.

On such missions, a “fly away kit” is normally available but not an entire brake assembly. Now with a flat tire and a brake assembly to be changed, the customer had to face reality: the mission would have to be delayed at great cost.

At 6 p.m. the captain informed Piaggio customer support about the brake failure in Entebbe. The Piaggio Aerospace mobile repair team and the required parts were dispatched the same evening, and they arrived on the afternoon of December 7. The local customs procedure to clear the parts was completed in a few hours and within 48 hours of the event, the aircraft was back in service.

SIKORSKY

Sikorsky’s U.S.-based Customer Care Center processes the worldwide S-92 fleet’s health and usage monitoring systems (Hums) data twice daily and maintains a watchlist dashboard of health indicators and trends. In one recent example, the center detected a rising trend involving one customer’s right-hand accessory module, which was well within limits but above the fleet average. The center shipped replacement parts to the forward stocking location (FSL) in Stavanger, Norway, ensuring their immediate availability when needed by the customer.

Since beginning operations to serve Scandinavian operators in September last year, the Stavanger FSL has serviced 350 part requests, with an average response time of less than one hour.

TEXTRON AVIATION

Imagine landing in Iceland and discovering a hydraulic brake leak. This is what confronted the crew of a Citation Excel during a ferry flight from the UK to North Carolina. Faced with being AOG in the middle of the north Atlantic, the crew called Textron Aviation’s 1Call single point of contact support system. A technician was dispatched to the aircraft, multiple parts were replaced and the aircraft was back in service within 72 hours.

“With 1Call, Textron Aviation was able to work the problem with succinct, clear outcomes,” said Jeff Melang, who manages the operation of the Citation Excel. “They responded immediately to our issue. The follow-up from the technician was on-point and continuous. It gave us that level of confidence. We were highly pleased with 1Call and with how Textron Aviation quickly pulled together to dispatch to this aircraft.” □