



DASSAULT

AIN Product Support Survey

Readers rate Dassault tops for jet support

by Jerry Siebenmark

For the second year in a row, Dassault Aviation held the top spot in the annual AIN Product Support Survey. The French airframer recorded this year's highest Combined Overall Average of Newer and Older Aircraft of 8.3, based on results of AIN's survey of business jet operators, pilots, and maintainers.

Dassault's 8.3 Overall Average rating is slightly lower than last year's 8.4, but still high enough to top Gulfstream Aerospace, which came in second for a second consecutive year

based on its large-cabin jet Combined Overall Average score of 8.2. That leaves Embraer in a tie for third place alongside Gulfstream's mid-cabin offerings, each with a score of 8.1.

For this year's survey, there were 687 respondents who rated 2,063 aircraft broken down into 141 models. The minimum number of ratings required to include a manufacturer's aircraft in the final results is 20. (For more details, see *Survey Rules and Methodology sidebar, right.*)

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, pressurized turboprop airplanes, and turbine-powered helicopters statistically valid information about the product support provided by aircraft manufacturers over the last year and to report this information to our readers. The goal is to encourage continuous improvement in aircraft product support throughout the industry.

This survey was conducted via a dedicated website, created to provide improved ease of use and to encourage greater reader participation. AIN emailed qualified readers a link to the survey website.

The survey website was open from May 4 to June 17. 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.
 - » 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 2020 AIN Product Support Survey results for aircraft are published in this issue, avionics will be featured next month, and engines will follow in October. ■

DASSAULT AVIATION

The Results

Dassault Aviation held on to its first-place ranking in the 2020 AIN Product Support Survey with an 8.3 Combined Overall Average of Newer and Older Aircraft, a rating that was slightly lower than the 8.4 it earned in 2019 but equal to the 8.3 it held in 2018, putting it at second place behind Gulfstream Aerospace for the 2018 survey. Dassault also scored well in the Newer Business Jets segment, sharing first place with Gulfstream's mid-cabin jets with an 8.4 Overall Average. It should be noted, however, that score was lower by 0.3 than the 8.7 Dassault earned in 2019, along with Gulfstream's midsize jets.

Continuing in that Newer Jets segment, Dassault's strongest ratings were Warranty Fulfillment at 9.0, AOG Response at 8.9, and Parts Availability at 8.6.

In terms of Older Business Jets, Dassault improved its score from 7.9 in last year's survey to 8.0, placing it third behind Embraer's combined lineup of Phenom, Legacy, and Lineage aircraft, and tied with Textron.

The Improvements

In the past 12 months, Dassault's focus has largely been on consolidating and integrating a network of MRO facilities that netted it 17 more factory-owned service centers through acquisitions of 11 ExecuJet, four TAG Aviation, and two Ruag MROs and service centers in Africa, Asia-Pacific, the Caribbean, Europe, Latin America, and the Middle East.

"The reason for making that move...in the longer term it clearly was to provide a better customer experience," said Jean Kayanakis, senior v-p of Dassault's worldwide customer service and service center network. "That was clearly understood by our customers. Even in the difficult times we were facing over the last three months, they have seen through that network that we were still able to provide the same service—whether it's in North America, whether it's in South [America], whether it's in northern Europe or the Middle East—and show them that we are really everywhere."

A key part of the integration has been training maintenance personnel new to the company's Falcon products. To that end, ExecuJet MRO Services in Kuala Lumpur, Malaysia has been approved for maintenance on all in-production Falcons while ExecuJet MRO Services Dubai has been approved for Falcon 2000 and 900 series aircraft. "This integration process is not that easy," he said, but "these people have very good technical skills."

At ExecuJet Dubai, which was part of Dassault's acquisition, plans call for an expansion of the line maintenance site at Al Maktoum International Airport by the end of 2021, "which is going to help in developing the Falcon capability in the region," Kayanakis said. The OEM also is planning to expand the ExecuJet Malaysia facility by building a new hangar there in the next two years, he said. "There's going to be a re-engineering of the airport... but as we are already at capacity there, we are adding rental hangars," Kayanakis explained.



› Dassault Aviation continued

Looking beyond this year, Kayanakis expects Dassault to unveil changes to its warranty and spares programs. For now, though, “it’s kind of secret,” he said. “But effectively we’re thinking about it. And we’ll have something coming definitely for early next year.” He said those coming changes will reflect an aging fleet and “a great market.”

Also on the support side, Dassault is deep in the process of planning for the the 6X, including maintenance planning for the new twin jet that is expected to enter the market in 2022. Kayanakis estimates there are, on average, about 10 people from customer service involved in the design engineering of the airplane. “We pulled out some skilled technicians from the service center network...and they are merged into the engineering group to provide feedback,” he said, adding that there will be “even deeper involvement” from customer service as the airplane begins its flight test program this year. “These people are gaining experience and once the aircraft is delivered, they will go back into the customer service environment to train the back-office people, to train the front-office people, and be the skilled pioneers of the program.”

Combined Overall Average Ratings of Newer and Older Aircraft	Overall Average 2020	Overall Average 2019	Rating Change from 2019 to 2020
Jets			
Dassault (Falcon)	8.3	8.4	-0.1
Gulfstream (GII-GV, G300-G650)	8.2	8.2	0.0
Embraer (Phenom, Legacy, Lineage)	8.1	8.2	-0.1
Gulfstream (G100 - G280)	8.1	8.3	-0.2
Bombardier (Global)	8.0	7.9	0.1
Bombardier (Challenger)	7.9	7.8	0.1
Textron Aviation (Citation)	7.9	7.8	0.1
Bombardier (Learjet)	7.2	7.5	-0.3
Textron Aviation (Hawker)	7.1	6.4	0.7
Turboprops			
Mitsubishi (MU-2, Solitaire, Marquise)	9.0	9.1	-0.1
Pilatus (PC-12)	8.0	8.3	-0.3
Textron Aviation (King Air)	7.5	7.3	0.2
Rotorcraft			
Bell	7.7	7.3	0.4
Leonardo	7.0	6.8	0.2
Airbus Helicopters	6.4	6.7	-0.3

* Listed in order of the 2020 overall average. Ties are listed alphabetically.

Category & Overall Average Ratings by Newer and Older Aircraft	Overall Average 2020	Overall Average 2019	Rating Change from 2019 to 2020	Factory Owned Service Centers	Authorized Service Centers	Parts Availability	Cost of Parts	AOG Response	Warranty Fulfillment	Technical Manuals	Technical Reps	Overall Aircraft Reliability
Newer Business Jets												
Dassault (Falcon)	8.4	8.7	-0.3	7.9	8.4	8.6	6.9	8.9	9.0	8.6	9.0	8.8
Gulfstream (G200 - G280)	8.4	8.7	-0.3	8.4	7.8	8.4	6.4	8.8	9.0	8.8	9.0	8.8
Bombardier (Challenger)	8.2	8.0	0.2	7.6	8.6	8.0	6.4	8.1	7.9	8.3	9.2	9.2
Gulfstream (G450-G650)	8.2	8.4	-0.2	8.0	7.7	8.4	6.1	8.7	8.7	8.2	8.8	8.9
Bombardier (Global)	8.1	8.0	0.1	7.5	8.2	8.0	6.6	8.7	8.5	8.3	8.8	8.6
Embraer (Phenom, Legacy, Lineage)	8.1	8.1	0.0	7.0	7.9	7.6	7.2	8.0	8.0	9.0	8.7	8.8
Textron Aviation (Citation)	7.9	7.8	0.1	7.6	7.6	8.1	7.0	8.1	8.3	8.0	7.8	8.6
Bombardier (Learjet)	7.5	7.7	-0.2	6.0	6.7	6.8	6.2	7.9	8.1	8.4	9.0	8.2
Older Business Jets												
Embraer (Phenom, Legacy, Lineage)	8.3	8.5	-0.2	8.3	8.6	7.9	6.9	8.6	8.1	8.8	8.8	8.9
Gulfstream (GII-G550)	8.1	7.8	0.3	7.1	7.9	8.2	5.9	8.8	8.4	8.5	9.3	8.9
Dassault (Falcon)	8.0	7.9	0.1	7.3	7.8	8.2	6.6	8.7	8.5	8.0	8.7	8.6
Textron Aviation (Citation)	8.0	7.7	0.3	7.6	7.8	8.3	6.3	8.2	8.3	8.3	8.6	8.7
Bombardier (Global)	7.7	7.5	0.2	7.1	7.5	7.8	6.1	7.8	7.6	7.9	8.8	8.5
Gulfstream (G100 - G200)	7.6	7.7	-0.1	7.7	8.4	6.6	5.6	8.6	9.1	7.6	9.0	8.3
Bombardier (Challenger)	7.3	7.2	0.1	6.6	7.2	7.1	5.7	7.5	7.3	8.2	8.1	7.9
Bombardier (Learjet)	7.0	7.3	-0.3	6.3	7.6	6.6	5.8	6.8	6.4	7.7	7.9	7.9
Textron Aviation (Hawker)	6.8	6.6	0.2	6.5	6.9	6.6	5.5	6.2	5.9	7.6	7.5	7.5
Newer Turboprops												
Pilatus (PC-12)	8.2	8.0	0.2	8.8	7.6	7.8	6.3	8.3	8.4	8.8	8.7	9.6
Textron Aviation (King Air)	7.6	7.4	0.2	6.7	8.0	7.4	6.9	7.8	7.9	7.3	7.5	8.8
Older Turboprops												
Mitsubishi (MU-2, Solitaire, Marquise)	9.0	9.1	-0.1	9.4	9.3	8.5	7.6	8.8	9.0	9.3	9.2	9.8
Textron Aviation (King Air)	7.5	7.1	0.4	6.6	7.4	7.6	5.8	7.1	7.8	7.9	8.6	9.2
Rotorcraft (all ages)												
Bell	7.7	7.3	0.4	8.0	7.3	7.4	6.1	7.8	7.6	8.2	9.0	8.5
Leonardo	7.0	6.8	0.2	N/A	5.8	6.8	6.5	6.7	7.3	8.0	8.0	8.6
Airbus Helicopters	6.4	6.7	-0.3	N/A	7.0	5.6	5.7	6.2	5.7	6.6	7.4	8.0

Listed in order of 2020 overall average. Ties are listed alphabetically. Bold indicates highest number in each category. N/A indicates not enough evaluations for statistical significance

GULFSTREAM AEROSPACE

The Results

The Savannah, Georgia-based airframer placed second in the Combined Overall Average Ratings of Newer and Older Aircraft with a rating of 8.2 for its large-cabin jets and third place in a tie with Embraer Executive Jets with a rating of 8.1 (down from 8.3 last year), based on the strength of its midsize G100-280 models.

In the Newer Business Jets category, Gulfstream tied Dassault for first place with an 8.4 rating for its midsize jets, which was down from an Overall Average of 8.7 last year, and tied Bombardier's Challenger series for second place with an 8.2 rating for its G300-650 models, which also was lower, by 0.2 from last year. For its midsize newer jets, Gulfstream received high marks for Factory Owned Service Centers (8.4) and Warranty Fulfillment (9.0).

Among Older Business Jets, Gulfstream's GII-GV saw improvement in the Overall Average, rising 0.3 from last year to 8.1 and a solid second-place seating. But the airframer's Overall Average for the G100-G280 edged slightly lower to 7.6 from 7.7 a year ago. The OEM did receive high marks for AOG Response (8.8), Technical Reps (9.3), and Overall Aircraft Reliability (8.9).

The Improvements

With the openings of new service centers last year in Appleton, Wisconsin; Savannah; and Van Nuys, California, Gulfstream continues to emphasize the importance of that network to its overall customer support. This year additional facilities will open in Palm Beach, Florida and Farnborough, UK as well as the 2021 opening of a \$35 million, 160,000-sq-ft service center in Fort Worth, Texas.

"We are very fortunate to be owned by General Dynamics," said Gulfstream customer support president Derek Zimmerman. "It's allowed us to make some pretty significant investments." The investment in new service centers reflects a decreased reliance on third-party maintenance of its aircraft and "I believe gives us a competitive advantage and value in the eyes of our customers," he added.

But improvements in its customer support don't stop with the service centers, Zimmerman noted. In December it opened a new European parts center in the Fokker Logistics Park adjacent to Amsterdam Schiphol Airport. That served as a relocation of the center from the London-Heathrow area in a bid to continue uninterrupted delivery of parts and materials to its European Union customers over concerns with the effects of Brexit. Gulfstream also has seen a 15 percent improvement in its space parts placement over the past 12 months, he said.



EMBRAER EXECUTIVE JETS

The Results

Like last year, Embraer Executive Jets remained tied for third place with Gulfstream for Combined Overall Average Ratings of Newer and Older Aircraft at a slightly lower rating of 8.1 (except this year it was tied with Gulfstream's mid-cabin aircraft rather than its large-cabins in the 2019 survey).

Embraer also retained the same 8.1 rating in the Newer Business Jets category as last year as well as held on to its third-place ranking but tied with Bombardier's large-cabin Global series. The Brazilian manufacturer also received improved ratings in Cost of Parts (7.6) and Technical Manuals (9.0).

In the Older Business Jets category, Embraer's rating dropped 0.2 from 2019's survey to 8.3 but held on to the No. 1 spot. It also received high ratings in Factory Owned Service Centers (8.3), Authorized Service Centers (8.6), Cost of Parts (6.9), Technical Manuals (8.8), and Overall Aircraft Reliability (8.9).

The Improvements

A primary customer support focus at Embraer in the past 12 months has been AOG support, said Frank Stevens, Embraer Services & Support v-p of global MRO centers. "A lot of our customers operate in far-flung places that we don't necessarily have a support structure at," Stevens noted. "So we've increased our AOG support teams and branded them in a way that makes the teams and the customers become more synergistic, and makes sure

that they are working much more together in these far-flung places."

Specifically, Embraer's TEAM—Technical Experts in Aviation Maintenance—concept involves organizing groups of airframe and powerplant mechanics and avionics technicians at its four North American service centers along with its 39 authorized service centers (ASCs) to provide AOG support. So far, Embraer has organized two seven-member TEAMS at its Fort Lauderdale, Florida and Mesa, Arizona service centers with plans to organize additional TEAMS at its other company-owned service centers.

Likewise, where Embraer has ASCs in geographic areas not served by its service centers, Stevens said it is working with them to provide trucks and manpower for AOG. "So we're broadening our AOG network capability by supporting it both inside our network and outside our network," he explained.

Another priority for the airframer is parts availability, said Armando Berti, Embraer Services & Support v-p of material solutions. Embraer currently has six main parts hubs across the world as well as more than 60 "offsite stocks." Following the cancellation of the Boeing-Embraer commercial tie-up, the company is "reviewing our policy to provide a much better service in terms of parts availability," Berti said. It also is working on optimizing the turnaround times on rotables, he added.

By the Numbers 2020

Respondents who rated aircraft	687
Respondents who completed the survey in its entirety	608
Aircraft rated	2063
Aircraft models receiving ratings	141
Minimum ratings required to be included in the data	20



BOMBARDIER

The Results

Bombardier held on to its fourth and fifth spots on the Combined Overall Average Ratings of Newer and Older Aircraft with a rating of 8.0 for its Global series and 7.9 for its Challenger midsize jets, both of which were 0.1 higher than last year's survey. But its Learjets, at 7.2, were supplanted by Textron Aviation's Citation line for the number 6 spot they held last year. Bombardier's Globals and Challengers scored 0.1 higher than in last year's survey, while Learjets fell 0.3 from 7.5.

In the Newer Business Jets category, Bombardier's Challengers tied for second place with an 8.2 rating while its Globals were tied for third place with an 8.1 rating. Learjets were last at 7.5. However, among Challengers in the categories, the company scored high in authorized service centers (8.6), Technical Reps (9.2), and Overall Aircraft Reliability (9.2).

Globals were strongest for Bombardier in the Older Business Jets category, at fourth place with a 7.7 rating,

up from 7.5 a year ago. Challengers and Learjets, however, came in at the sixth and seventh spots with ratings of 7.3 and 7.0, respectively.

The Improvements

Bombardier Aviation has put a heavy emphasis on growing its customer support business in the past 12 months through a number of different means, said v-p of customer support Andy Nureddin. "We've grown our (mobile response team) trucks, we've grown our AOG capabilities, we introduced a parts express aircraft [a Challenger 300] in Europe—those two parts express airplanes have just been our arms and legs given the current restrictions on travel—[and added] additional line maintenance stations in Van Nuys and Teterboro."

On the service center side, the Canadian airframer announced plans to replace its London Biggin Hill service center with a larger, 250,000-sq-ft facility expected to open in 2022. It also still expects to open a 430,000-sq-ft

service center in Singapore this year, though Nureddin said the Covid-19 pandemic forced a pause in its construction, which resumed in July. He said the Singapore facility was in an "advanced state of construction" when work there had to stop. What's left to do, he added, is to "stuff" the inside of the facility. It also completed construction on a 300,000-sq-ft service center at Miami-Opa Locka Executive Airport in Florida this year. Nureddin said an expansion of company-owned service centers follows a change of philosophy at the company over the past few years, one in which it is taking a more "holistic lifecycle view" of its aircraft and the customers who buy them. "We [previously] depended a lot on authorizing service facilities across the board," he explained. "And ASFs do play an important role. But we recognize also that having the customer coming back to Bombardier, 'bringing their jets home,' is the proper recipe. And in order to do that we embarked on probably one of the most aggressive expansion projects in the past five years."

TEXTRON AVIATION

The Results

The Wichita-based airframer saw improvement for both its Citation and Hawker products in the survey's Combined Overall Average Ratings of Newer and Older Aircraft by increasing its year-over-year ratings 0.1 to 7.9 for Citation and a significant 0.7 to 7.1 for Hawker, giving the OEM a slight edge over Bombardier's Learjet and a tie for the fifth spot with Bombardier's Challenger.

In the Newer Business Jets category it maintained that lead over Learjet with a 7.9 Overall Average and fourth place. But in the Older Business Jets category, Citation ranked even higher and earned a third-place spot with an Overall Average rating of 8.0, up from 7.7 in last year's survey and a tie with Dassault. Citations also earned high marks with an 8.3 in Parts Availability.

The Hawker models' Overall Average score also improved year over year to 6.8 from 6.6.

Among turboprops, Textron Aviation's Beechcraft King Air recorded a Combined Overall Average Rating of Newer and Older Aircraft of 7.5, up 0.2, but behind Pilatus and Mitsubishi. The King Airs were second to Pilatus's PC-12 in the Newer Turboprops category with an Overall Average score of 7.6 but earned high marks for Authorized Service Centers (8.0) and Cost of Parts (6.9). In the Older Turboprops category the King Airs earned an Overall Average of 7.5, which was up strongly from 7.1 in the 2019 survey.

The Improvements

Textron Aviation has put an emphasis on improving parts and distribution in the past year, particularly in Europe and Asia-Pacific.

Textron Aviation senior v-p of parts and programs Kriya Shortt noted that effort began with the expansion last October of its Dusseldorf, Germany distribution center, which is located within its service center there. "We are

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Above & Beyond

OEMs

Daniel Prairie (Bell Helicopter)

Bell CSR for more than 25 years in [Brazil]. Always available, friendly, representing his company in an efficient and reliable way. Highly proficient in the Bell Helicopter models operated in the country. Dan Prairie is the synonym of Bell in Brazil.

Rebecca Kripos (Bombardier)

Rebecca is my go to for any parts issues we might have. I've routinely run into difficulties with procuring parts or figuring out a return and Rebecca is always there to work through the issue and solve it effectively and efficiently. She's an asset to the customer and to Bombardier.

Rick Best (Textron Aviation)

Rick has been the go to guy for me, I can call with any question and if he doesn't know, he finds out who does and has them call me. He then calls and makes sure they contacted me and I have what I need. He also will tackle issues with parts or service center problems and make sure I am connected with the people who I need to talk to about issues and wants to be kept in the loop on how that progresses.

I look forward to his visits so we can go over things. I get the feeling he really cares about how we are doing and the airplane, and is it working for us.

Julija Gerasimuk (Dassault)

Julija is one of the best sales managers that I worked with. She is really going above and beyond for the customer and

with her attitude and customer orientation, she really provides perfect service for the customer.

Vignesh Kasiviswanathan (Embraer)

He is very humble, and the most important thing that makes him so special is "his availability for the customer." He is always available 24/7, any time day or night. There were several AOG instances where he helped me with technical assistance and also helped me with material and logistics support.

Nacho Jara (Gulfstream)

Nacho understands the true meaning of customer support. He will always answer the phone and will do all he can to provide the required parts support. He is a true listener and has always followed through to whatever end. We count on his diligence as it's becoming a rare thing these days.

John Cary and Graham Allan (Leonardo)

Both these customer support reps have helped an enormous amount to get me parts, repair schemes, technical support, etc. Any time I have called they jump to help right away and always ensure that all our company's needs are met before they leave or end the conversation (they never just leave you hanging around waiting for an answer).

Pablo Amodeo (Pilatus)

Always available to satisfy any request and provide daily followup to the customer. He helps to keep the maintenance costs low as much as possible.

Service Centers

John Arnett (Flightstar)

John answers the phone on the first call. These guys have the best customer support of any MRO we have visited. They are the experts in Lear 45/75 maintenance in our area. Great service, reasonable pricing.

Mark James (Intercontinental Jet Service)

Mark is a quality person and an outstanding customer relations asset for Mitsubishi and Intercontinental Jet Service Corporation. Amazingly responsive, knowledgeable, available, and helpful whenever the rare aircraft problem arises, and fantastic at catering to the unique demands of our operation and attention to detail.

Santiago Carol (West Star Aviation)

One of the best CSRs I ever had, he is always working with the same quality and attitude for many years (25), providing excellent options and services with our aircraft.

Thomas Bartolomeo (Aero Star Aviation)

Tommy's knowledge and experience on the Embraer Phenom 100 and Phenom 300 have vastly surpassed any maintenance facility we have been to. Tommy answers his phone at all hours of the day. Willing to help achieve mission critical flights, and has the mindset of "making it happen"

MITSUBISHI HEAVY INDUSTRIES AMERICA

The Results

Mitsubishi's out-of-production MU-2 and its variants continue their dominance in the Combined Overall Average Ratings of Newer and Older Aircraft, holding the top spot once again with an Overall Average of 9.0, which is slightly down from 9.1 in last year's survey.

The same is true in the Older Turboprops category, where an Overall Average of 9.0 for the high-wing twin bested the King Air series. The MU-2 also retained top marks in every other category: Factory Owned Service Centers (9.4), Authorized Service Centers (9.3), Parts Availability (8.5), Cost of Parts (7.6), AOG Response (8.8), Warranty Fulfillment (9.0), Technical Manuals (9.3), Technical Reps (9.2), and Overall Aircraft Reliability (9.8).

The Improvements

Mitsubishi Heavy Industries America (MHIA) continues to support the aircraft through its MU-2 Aircraft Product Support Division located in Addison, Texas, which provides product support programs worldwide for the Mitsubishi MU-2B series. The division's support

comprises spare parts sales, engineering, field support, quality assurance, and flight safety as well as offering learning opportunities based on the latest best practices in operations and safety.

Beginning last year, MHIA launched its MU-2 webinar series with presentations by industry experts for MU-2 owners and operators. The webinars are broadcast live and are also available on-demand. MHIA recently hosted an angle of attack system webinar and another on Special Federal Aviation Regulation 118, which in response to the Covid-19 pandemic provides relief from several regulatory requirements, including Part 91 Subpart N for MU-2 pilots. The company also plans to host webinars on safety enhancing systems such as voice alerting and the ice detector.

Further, MHIA said it has taken on initiatives to localize the manufacturing of spare parts in the U.S. and to consolidate regulatory oversight, which it expects will enhance the MU-2 parts supply chain and FAA coordination into the future.



PILATUS

PILATUS

The Results

Pilatus Aircraft has maintained a second-place ranking in the Combined Overall Average of Newer and Older Aircraft in the turboprop segment with a score of 8.0. That's down from an Overall Average of 8.3 last year and 8.2 in 2018.

In the Newer Turboprops category Pilatus held first place with an Overall Average of 8.2, up from last year's 8.0. The company also received high marks for Factory Owned Service Centers (8.8), Parts Availability (7.8), AOG Response (8.3), Warranty Fulfillment (8.4), Technical Manuals (8.8), Technical Reps (8.7), and Overall Aircraft Reliability (9.6).

The Improvements

The biggest customer support changes at Pilatus come with its newest turboprop offering, the PC-12 NGX. It wasn't until late last year that Pilatus began offering a support program—CrystalCare—for its latest single-engine turboprop offering because under previous variants customers didn't want it. "We had attempted almost 20 years ago to launch a [support] program for the PC-12 and we were ready to roll it out and the customer base said, 'We don't need it,'" said Pilatus v-p of customer service Piotr Wolak. "We tried and there really were no takers."

But times changed and so did the demands of fleet operators and bank lenders, prompting Pilatus to unveil

» **Textron Aviation continued**

seeing an improved support level for our customers in fill rate through Europe as well as the anecdotal feedback of our customers that they have responded very favorably," Shortt noted.

The Dusseldorf expansion followed the establishment of a new distribution center in Melbourne, Australia, which came as a by-product of the company's acquisition of Premair. And the Australia distribution center followed a 2018 expansion of its parts warehouse in Singapore.

"APAC is a huge geographic region, so while we have continued to invest in the warehouse in Singapore, having parts in Singapore doesn't really help a customer who's Australia-based," Shortt added. Between those distribution centers and a total of more than 20 global parts locations, 99.9 percent of Textron's in-stock parts ship on the same day, she added.

In the service center side of the house, the company has implemented what it calls "smart scheduling," with a goal of minimizing the amount of time a customer's aircraft is in the service center for scheduled maintenance and modifications, said Lannie O'Bannion, v-p of North America customer service centers. The company also continues to evaluate flat-rate hours on a variety of Citation inspections, which in some cases has resulted in fewer hours and thus lower maintenance costs for Citation customers, O'Bannion added. It also has introduced a data maintenance hub, which offers customers a record of maintenance performed on their aircraft through a network of recommended third-party maintenance tracking system providers that has been expanded to include Camp Systems, Flightdocs, SierraTrax, and Traxxall. The data hub also will be a new feature in its customer portal, O'Bannion noted.

» **Pilatus continued**

the support program for the NGX alongside the airplane's rollout at the 2019 NBAA-BACE, said customer support director Andy Roth.

"Our typical client nowadays is very different than from 20 years ago," Wolak explained. "Back then, the predominant customer was a Part 91 owner-flown operator whereas nowadays we deal a lot with the fleet operators, the corporate flight departments, the 135 charter operations."

With more than 1,730 deliveries of PC-12s to date, Pilatus also has been able to increase the NGX's scheduled inspection interval from 300 hours to 600 hours, Wolak added. "That's a huge impact on the direct operating cost and it's not been easy to get there because you know when you certify an airplane you have to come up with a maintenance program that's certifiable," he said. "Granted, the original PC-12 was certified in '94 [and had a 150-hour inspection interval] and it took us a few years to collect the data and prove to the authorities that its feasible to move to that 300 hours [two years ago]."



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Among rotorcraft manufacturers, Bell retained its first-place spot with a score of 7.7 on the Combined Overall Average Ratings of Newer and Older Aircraft, improving its score from last year's survey by 0.4. Leonardo, too, retained its second-place seating with an Overall Average of 7.0—up from 6.8 last year—while Airbus Helicopters held on to third with an Overall Average of 6.4.

BELL

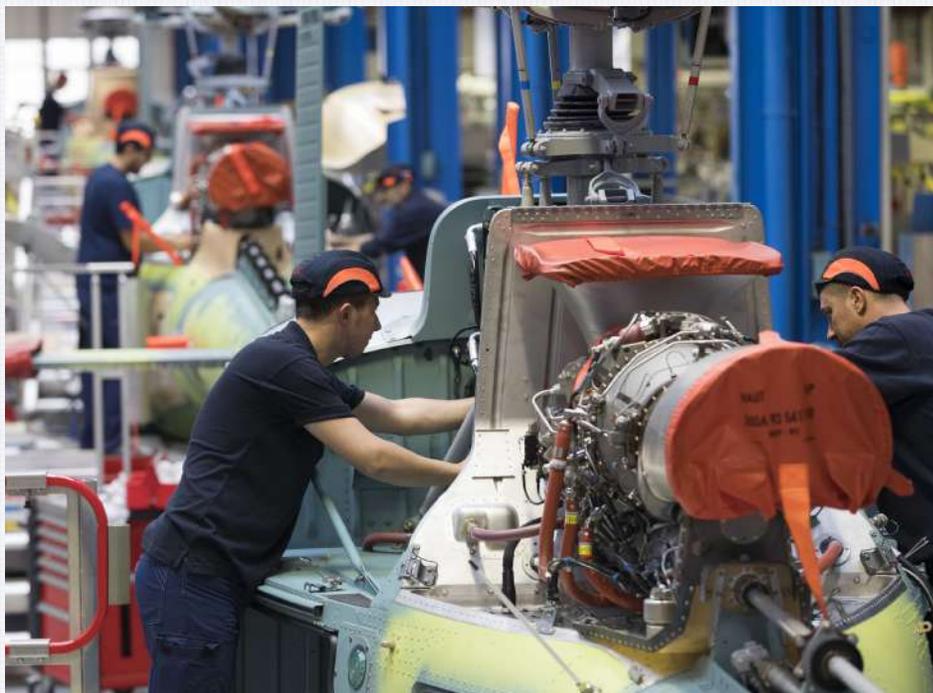
The results

In addition to maintaining the overall top spot among the survey's rotorcraft manufacturers, **AIN** readers gave Bell high marks in seven of nine other categories: Factory Owned Service Centers (8.0), Authorized Service Centers (7.3), Parts Availability (7.4), AOG Response (7.8), Warranty Fulfillment (7.6), Technical Manuals (8.2), and Technical Reps (9.0).

The Improvements

Ronnie Ries, Bell senior manager of commercial marketing and customer experience, said the Fort Worth, Texas-based OEM is taking a hard look at its parts pricing—especially parts that have been developed by third parties under FAA parts manufacturer approval (PMA) regulations—as part of an initiative to drive down direct operating and maintenance costs for customers. “A lot of our customers have started to experience some price reductions on certain parts,” he explained. “We’ve been really trying to focus on that.”

So far, Bell has identified about 80 parts to which that effort applies, and some of those have seen a price drop of as much as 50 percent, Ries added. Also, Bell earlier this year opened its parts marketplace to all owners and operators of its rotorcraft as well as some authorized maintainers. Previously, not all customers had the ability to purchase parts directly from Bell, much less with a credit card. Instead, they generally had to get them through one of its service centers or authorized service facilities. This is all done through a single web portal that also allows owners and operators to access technical publications as well as submit and track answers to questions about customer and product support.



AIRBUS

The Results

Airbus Helicopters took the third-place spot in the Combined Overall Average Ratings of Newer and Older Aircraft, although it did see a year-over-year decline of 0.3 in its Overall Average, to 6.4

The Improvements

Christoph Zammert, executive v-p of Airbus Helicopters customer service and support, said the company continues to make inroads with customers signing up for its HCare customer service program. In 2019 Airbus added more than 250 helicopters to HCare's global offering, bringing the total number of helicopters enrolled in HCare to more than 2,200, or about 20 percent of the fleet, according to Zammert.

In the past 12 months Airbus also has invested in its

spares stock, adding more than 33,000 part numbers that are distributed from four logistics hubs in France, Germany, the U.S., and China as well as “local inventories” in the UK, Canada, Brazil, South Africa, Japan and Australia. “This is making sure our customers have the spares and repairs that they need in order to operate the aircraft,” Zammert explained.

Airbus also continues to work on easing direct maintenance costs for owners and operators of its rotorcraft, he said. For example, last year Airbus eliminated the 12-year inspection on the H125 light single as well as worked with Safran to increase the time between overhaul on the Arriel engine powering the H125 and H130 by 25 percent. “And we do the same on all our products every year, trying to write out a couple of dollars per flight hour,” Zammert added.

LEONARDO

The Results

As well as maintaining its second-place position in the Combined Overall Average Ratings of Newer and Older Aircraft, the Italian helicopter manufacturer received high marks for Cost of Parts (6.5) and Overall Aircraft Reliability (8.6).

The Improvements

One of the biggest activities within Leonardo's customer support and training operation in the past year has been the standing up of a \$65 million training academy in Philadelphia, said Paolo Petrosso, v-p of simulation and training services. First announced at the 2019 HAI Heli-Expo, the

academy will open with a Level D full-flight simulator for the AW139, AW169, and AW609. “Certification of the [simulators] might move for several reasons into 2021 but physically all the devices are going to be in Philadelphia before year end,” Petrosso said.

More recently on the MRO side of the house, Leonardo completed an acquisition of Precision Air Services in South Africa, which has been a Leonardo authorized service center for years. In February the company also broke ground on a new service center near São Paulo, Brazil. It will include maintenance hangars, bonded warehouse, workshops, and a dedicated heliport and will house spares, maintenance,

product support, and engineering services for the AW119 single and AW109 light twin, and the AW139, AW169, and AW189. Meanwhile, in the U.S., Leonardo's service organization has logged more than a full year of operations at its Broussard, Louisiana customer support facility. That location's primary focus is the structural repair of the main and tail rotor blades of Leonardo's commercial helicopters “up to the same level of complexity that we typically do in our production plant,” said Giovanni Cecchelli, v-p of global customer support. “This is really part of our strategy to get close to our customers with very clear brand and ethos that is recognizable.”